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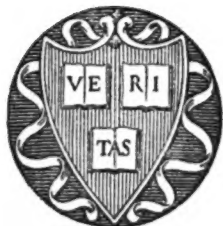
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JOURNAL OF THE STATISTICAL SOCIETY,

MARCH, 1870.

On JOINT STOCK COMPANIES. By PROFESSOR LEONE LEVI, F.S.A.,
Doctor of Economic Science, and of Lincoln's Inn, Barrister-at-Law.

[Read before the Statistical Society, January, 1870.]

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I.—Introduction.

IMPORTANT economic and legal questions have been solved in late years by our legislation on joint stock companies, and with twelve years' experience of the Act for their registration and incorporation, and thirteen more years' experience of the Acts allowing the formation of such with limited or unlimited liability, it becomes the proper function of the statistician to study the teaching of facts, and to give to the legislator the benefit of their lessons. The continued depression of trade, the unhappy revelations of the bankruptcy courts, and the criminal proceedings instituted against certain directors of banking and financial companies, have, moreover, suggested a serious inquiry into the working of the law on the subject, whilst there are many facts connected with such companies, illustrative of the various modes of investment of commercial capital, which cannot fail to interest the merchant, the banker, and the political economist. Time was, when the foreign and colonial

trade of the country was, in a great measure, monopolised by chartered companies, such as the Russian and the Levant, the East and the West Indies Companies, the Hudson Bay and the African. All such monopolies have long ago been abolished, yet the reign of companies is as undisputed as ever. The roads of the country are monopolised by railway companies. The supply of gas and water is entirely in the hands of public companies. The business of the country is gradually passing from the hands of private firms to those of joint stock companies. Between 1857 and 1867, the number of private banks and their branches, in the United Kingdom, diminished from 555 to 545, but the number of joint stock banks and their branches increased from 1,481 to 1,904, the increase in the metropolis having been from 36 in 1857, to 85 in 1867. Finance companies are quite modern institutions. The business of insurance received an enormous development through the instrumentality of mutual and "mixed," if not absolutely, proprietary companies. And the list of miscellaneous companies formed for the investment of capital within the last ten years is very extensive and varied. Is a large association well fitted for the prosecution of every branch of industry? Are the chances of success equal or better when business is conducted by private individuals as by public companies? Questions such as these are of a most interesting character, and we may gather facts from the statistics of joint stock companies which may assist us in arriving at a sound opinion respecting them.

II.—*History of Legislation on Joint Stock Companies.*

We might imagine, that in a commercial country like Britain the law should have from the very first been favourable to the formation of partnerships and companies. Those gigantic undertakings, which have been conceived and perfected with so much success, and which have exercised so powerful an influence in promoting the progress of the country, have they not been mostly all ushered into existence by the agency of public companies? And yet during a very long period the law has been a stumbling block in the way of joint stock enterprise. There is nothing in the common law operating to the discouragement of partnerships or companies; but the statute law was early required to restrain fraudulent practices connected with them. In the formation of companies for undertakings of a permanent character, a joint stock is absolutely necessary, and means are required for allowing persons to embark into, or to withdraw their funds from the concern, or in other words, the capital must be divided into transferable shares. But that power was soon abused, and jobbing in shares became such a mania, that the legislature was constrained to interfere

by a statute, not inaptly called the "Bubble Act,"* which imposed an effectual check to the formation of companies with corporate capacity, except by royal charter. This absolute restriction, however, did not last very long, the necessities of trade having dictated a relaxation. Accordingly, powers were given to the Crown, by letters patent, to grant to any trading company, any of the privileges of suing and being sued in the name of an officer, as well as the right of trading with limited liability, upon such terms and conditions as the Crown should think fit to impose.†

The state of the law, being still the subject of considerable complaints, in 1837, the Board of Trade instructed Mr. Bellender Ker to inquire more especially into the difficulties which existed in suing and being sued when the partners are numerous, and to consider, whether it would be expedient to introduce a law authorising persons to become partners in trade with a limited responsibility; and upon his report, another Act‡ was passed, by which Her Majesty was empowered to grant letters patent or charters of a limited nature, to joint stock companies. Again, in 1844, in consequence of many fraudulent practices, a Committee of the House of Commons was appointed on the subject, and on their recommendation, amongst other things, "That in order to prevent the "establishment of fraudulent companies, and to protect the interests "of the shareholders and of the public, it is expedient that all joint "stock companies for commercial purposes, whether future or already "formed, be registered in an office to be appointed for that purpose," the Registration Act was passed.§ In 1850, another committee was appointed to consider and suggest means of removing obstacles and giving facilities to safe investments for the savings of the middle and working classes, which reported that charters should be granted with the greatest caution, but at a far more reasonable cost; and, also, that ultimate benefit would ensue from any measures which the legislature may be enabled to devise for simplifying the operation of the law and unfettering the energies of trade. Again, in 1851, a Committee of the House of Commons was appointed to consider the law of partnership and the expediency of facilitating the limitation of liability, with a view to encourage useful enterprise, and the additional employment of labour, and that committee, amongst other things, recommended, that power be given to lend money for periods not less than twelve months, at a rate of interest varying with the rate of profits in the business in which such money may be employed, the claim for repayment of such loans being postponed to that of other creditors. In 1853, a royal com-

* 6 Geo. I, cap. 18.

† 6 Geo. IV, cap. 91.

‡ 7 Wm. IV, and 1 Vict., cap. 73.

§ 7 and 8 Vict., cap. 110.

mission having been appointed to inquire how far the mercantile laws in the different parts of the United Kingdom may be advantageously assimilated, to them was also intrusted the duty to ascertain, whether any, and what alterations should be made in the law of partnership, as regards the question of the limited or unlimited responsibility of partners; and their report was to the effect, that it was not expedient to introduce such partnerships, and to alter the law, or to allow all persons at their own election to trade with limited liability. In 1854, however, Mr. Collier, now Her Majesty's Attorney-General, moved a resolution in the House of Commons, "That the law of partnership, which renders every person, who, though not an ostensible partner, shares the profits of a trading concern, liable to the whole of its debts, is unsatisfactory, and should be so far modified as to permit persons to contribute to the capital of such concerns on terms of sharing their profits, without incurring liability beyond a limited amount." The resolution was seconded by Viscount Goderich, and well supported by the House, and in the end Mr. Collier withdrew it, on the understanding that the subject would receive the serious consideration of Her Majesty's Government. Accordingly, in 1855, two bills were introduced by Mr. Fitz Roy, Mr. Bouverie, and Viscount Palmerston, one for limiting the liability of members of certain joint stock companies, and another to amend the law of partnership, to the effect, that persons lending money to a partnership on condition of receiving a proportion of profits, varying with the amount of the same, should not thereby be considered a partner. The first of these bills* passed into law; the second was withdrawn, but from that year the principle was admitted, and the Acts passed in 1856,† 1857,‡ 1858,§ gradually removed the exceptions originally made affecting insurance and banking. Finally, in 1862,|| a new Act for the regulation of companies was passed, by which any seven or more persons associated for any lawful purpose may, by subscribing a memorandum of association, constitute themselves a company with limited or unlimited liability. To this, which is now the principal Act, we must add the Act of 1867,¶ with provisions allowing limited companies to be formed, with directors having an unlimited liability, as well as the reduction of the capital and shares. And under the Partnership Amendment Act of 1865 **, the advance of money on contract to receive a share of profit, or the remuneration of an agent by a share of the profits, does no longer constitute the lender or the agent a partner.

* 18 and 19 Vict., cap. 133.

† 19 and 20 Vict., cap. 47.

‡ 20 and 21 Vict., cap. 78.

§ 22 Vict., cap. 91.

|| 25 and 26 Vict., cap. 89.

¶ 30 and 31 Vict., cap. 131.

** 28 and 29 Vict., cap. 126.

III.—*Sources of Information.*

A return is annually published by the House of Commons, for which we are indebted to the practical wisdom of Mr. Lusk, of the number of joint stock companies registered from year to year, giving the name and object of each company, the place of residence, the date of registration, the number of persons who signed the memorandum of association, the number of shares taken by the subscribers to the memorandum of association, the nominal capital, the number of shares into which it is divided, the number of shares taken at date of last return, the amount of calls made on each share, the total amount of calls received, the number of shareholders in company at the date of last return, and whether the company is still in operation or being wound up. Would that such information were actually given. As a matter of fact, however, the most material data relating to the condition of the companies at the date of the return but seldom appear. "No return" is the almost uniform expression in four out of eight columns of matter, whilst the last, as to whether the companies are still in operation or being wound up, consists in most cases of "supposed to be still in operation." For all practical purposes, therefore, the return is both imperfect and useless. Yet, notwithstanding, with these returns on hand; with other information available for the purpose from other sources; with more details than are published, obtained through the kindness of the registrar; and with the valuable tables supplied to me by an able officer at the registrar's office, Mr. Samuel Hayman, I trust I may bring forward facts in connection with our joint stock companies which will deserve the careful attention of the Society.

IV.—*Number of Companies Registered.*

The number of companies registered from year to year consists of those formed under the Registration Acts of 1844, 1856, 1857, and 1862, and of those existing previously to the passing of those Acts. Although in this paper, which principally deals with the enterprises brought out under the new legislation on joint stock companies, reference is made solely to the companies newly formed, it is desirable to give a general view of all the companies so registered. The total number is as follows :—

Registered under the 7 and 8 Vict., cap. 101 (1844)	4,049
" 19 and 20 Vict., cap. 47, and 20 and 21 Vict., cap. 14 (1856 and 1857)	2,549
" existing, previously to the passing of the above Acts	621
" 25 and 26 Vict., cap. 89 (1862)	4,507
" existing, previously to the passing of the above Act	180
	<hr/> 11,906

The number of joint stock companies registered in every year, even exclusive of those previously existing, is not an absolute index of the number of companies actually formed, instances having occurred where the same companies were first dissolved and then started afresh under new conditions, but for practical purposes we may assume that the number registered under the respective Acts represents the extent in which joint stock enterprise has been carried on during the last twenty-five years.

It will be seen from the tables that a remarkable increase took place in the number of companies registered in the second over the first period, the average number per year having been 543 from 1856 to 1868, and 337 from 1844 to 1855. But we must take into account the large expansion of trade during the last twenty-five years. When we compare the number registered with the amount of exports of British produce, the best uniform standard of trade we possess, we find that the number of companies formed, which from 1844 to 1855 was in the proportion of 4.66 of provisionally registered, and 1.11 of completely registered per 1,000,000*l.*, exported from 1856 to 1868, increased to 3.69 per 1,000,000*l.* There were years, certainly, when the proportion was considerably larger. But that affords an important illustration of these panics which now and then produce such a convulsion in trade and finance. Thus the number of companies formed in 1845 exhibits the amount of railway speculation which then raged—the forerunner of the great crisis of 1847. The large number formed in 1852 and 1853, reminds us of times when it seemed as if gold was to become much more abundant than the means of employing it to advantage; and as we advance to 1863, 1864, and 1865, the large numbers are a certain prelude to the crisis which startled the commercial world in May, 1866.

V.—*Companies Formed and Abandoned.*

By comparing the number of companies provisionally registered with those which obtained a certificate of complete registration under the Act of 1844, and by deducting from the number registered under the subsequent Acts of 1856 and 1862, those companies which were practically abandoned before starting, we are able to calculate, with some amount of accuracy, what proportion of the projects which were started from year to year ever came to maturity. From 1844 to 1855, inclusive, there were registered provisionally 4,049 companies, and of these as many as 3,084, or 76 per cent., were abandoned. From 1856 to 1868, a period of thirteen years, 7,056 companies were registered, and of these, 1,245, or 18 per cent., were abandoned. During the whole period, there were formed in all 11,105 new companies, of which 4,329, or 39 per cent. of the whole, were abandoned. It is worthy of notice, that notwithstanding

ing the large increase in the number of companies registered during the latter period, the number of abortions was considerably less than in the former one. In truth, the provisional registration provided by the Act of 1844 was no indication whatever of the formation of a company; in many cases it amounted to no more than the registering of a scheme in the mind and imagination of a few concoctors or promoters. Under the later Acts, however, the registration implies the formal contract of at least seven persons to unite themselves into partnership, entailing an obligation from which they cannot withdraw except by a formal and legal act.

What eventually became of the 5,811 companies finally constituted and in operation since 1856, we shall presently see. Meanwhile it is important to realise that the chances of any projected companies ever being practically constituted, are no more than two to three. Nay, more, it is a fact worth recording at the outset, that out of 7,056 companies registered since 1856, as many as 4,082 are since gone, one way or another, so that the chances of real permanency is little more than one to three of all the companies formed.

VI.—*Classification of Companies.*

The objects for which joint stock companies are now formed are exceedingly varied. But though an exact classification of any number of facts is extremely difficult, it is evident that among the objects sufficiently definite, railways, mining, gas, have the foremost place in joint stock enterprise. Next in importance are insurance, trading, and navigation; and next investments, hotels, and banking. As we have seen, the projecting and the formal establishment of a company are two different things, and they do not often advance *pari passu* with all kinds of companies. Whilst of 1,791 companies for railways provisionally registered, only 170 were finally constituted, or only 9 per cent.; of gas companies, out of 1,039 projected, as many as 890 were carried out, or 85 per cent.; and of water companies, out of 91 projected, 79, or 86 per cent., were finally established. Still more prominently does the different character of the joint stock companies appear, when we compare the number formally established with the number wound up, or not heard of, which in popular language are termed "come to grief." From 1856 to 1868, there were 257 banking and finance companies formed; and of these, 160 were wound up and not heard of, or a proportion of 62 per cent. Of gas companies, there were 678 established, and of these only 102, or 15 per cent., ceased to exist. Banking, finance, insurance, mining, which seem the safest and most attractive objects for profit, appear to have the least chance of stability. "The business of a great association," said Mr. McCulloch, "must be conducted by factors or agents, and unless it

“be of such a nature as to admit of their being clearly pointed out and defined, the association would cease to have any effectual control over them, and would be in a great measure at their mercy. . . . Hence the different success of companies where business may be conducted according to a nearly uniform system, such as dock, canal, and insurance companies, railway companies, &c., and those whose business does not admit of being reduced to any regular plan, and where much must always be left to the sagacity and enterprise of those employed. All purely commercial companies trading upon a joint stock, belong to the latter class.” To a great extent Mr. McCulloch’s observations are fully supported by the facts we have thus observed. But a very different appreciation is evidently formed by Mr. McCulloch as regards insurance companies, than is borne out by the fact that of 190 insurance companies newly formed, since 1856, as many as 97 were wound up or not heard of. In late years, an extraordinary amount of speculation and interest seems to have pervaded this kind of business, which may perhaps account for these results. According to a return* of *life* assurance companies registered since 1844, it would seem, that under the 7 and 8 Vict., there were registered 172 companies. Under the Companies Act of 1862, 95 more companies were registered, and of companies previously existing 5, making in all 272. Of these companies, 10 were amalgamated with other companies, 34 transferred the business to other companies, and 152 were wound up or were supposed to have ceased business. Here then we have 196 companies disappearing out of 272 formed, or in the proportion of 72 per cent. ‡ On the other hand, the black book of joint stock companies, or a return published of the number winding-up under the direction of the Court of Chancery,† included 30 insurance, 26 hotel, 62 finance, 75 mining, 18 navigation, and 269 other companies. Comparing these with the number formed, it would appear that banking and finance companies ended their existence in the

* 188 and 188—1 of 1869.

† 104 and 104—1 of 1869.

‡ By the 20 and 21 Vict., c. 80, it was provided that the Joint Stock Companies Acts, 1856 and 1857, should not be deemed to repeal the 7 and 8 Vict., c. 110, as respects insurance companies. Between the passing of the Act of 1856 and that of 1862, 31 insurance companies were registered, and these will be found included in Table D, p. 81, with the companies existing previously to the passing of the latter Act, and subsequently registered as unlimited companies. Of 168 assurance companies registered under the Act of 1862, 93 were for *life* assurance, 83 limited, and 10 unlimited companies. Of the 93, 19 were abandoned before starting, 26 were wound up, and 15 were not heard of, or had made no return, leaving apparently only 33 in existence. Of the 82 old insurance companies registered, 5 were with limited and 77 with unlimited liability. And of the 82, 52 were *life* insurance companies, of which 9 were abandoned, 14 were wound up, and 1 was not heard of. The whole number of insurance companies registered was 272, and of these 145 were *life*, 28 *fire*, 50 *marine*, 27 *cattle*, and 22 *miscellanies*.

Court of Chancery, in the proportion of 24 per cent., whilst insurance companies reached the Court of Chancery at the rate of only 5 per cent., and hotel companies at the rate of 8 per cent. The classification of joint stock companies is important, as affording a clue to the range and direction of speculation at exciting and perilous times. The report of joint stock companies in 1844, gives us the number of projected companies formed during the mania of 1824 and 1825, as well as in 1834 and 1836. In 1824-25, insurance, mining, principally foreign, loans and investments, railways and canals, were the most popular objects. In 1834-36, railways and banking monopolised public attention. In 1845, railways were almost exclusively the objects of frenzied speculation. In 1863-66, finance, banking, mining and manufacture seemed the most attractive for the employment of capital. Other important considerations in connection with the direction of joint stock enterprises, may be suggested. The speculation of 1824-25, took large amount of capital away to other countries for mining and foreign loans; that of 1845 absorbed a large proportion of capital at home in railways, thus converting floating into fixed capital. The speculation in 1863-66 was, in a great measure connected with financial and banking operations abroad, which took much capital out of the country. But we must desist from further observations on the many interesting questions naturally arising out of the classification of companies.

VII.—*The Upper Ten Thousand of Joint Stock Companies.*

The better to estimate the character and danger attending joint stock enterprise, it might be useful to trace the fortunes of those larger companies which stand prominent in the eyes of the public, not only for the importance of their transactions, but as influencing by their action the whole trade of the kingdom. From 1856 to 1868, about 300 companies were formed in the United Kingdom, with a nominal capital of 1,000,000*l.* and upwards, and together they professed to possess a nominal capital of 504,000,000*l.*, three-fourths of the whole number and capital having been formed between 1863 and 1865. Banking and finance were the chief objects of these companies; and among them we find all those schemes which, on the example of the *Crédit Mobilier* and *Crédit Foncier* in France, seemed for a while able to carry on their shoulders any enterprise at home and abroad, no matter how uncertain; to undertake loans for any State; and to accomplish greater things than any banker or capitalist heretofore attempted. The banks, 98 in number, were connected with every part of the world. Railways in the most distant countries attracted much attention, and so telegraphs, navigation, and insurance. What became of these 300 companies? A fifth of them, or just 60, were abandoned before starting, 87 more were wound

up, 2 obtained Acts of Parliament, and 29 filed no return. Out of 300 companies, as many as 178 ceased to exist, and 122, or about 40 per cent., only remained. The greatest havoc seems to have taken place in the finance companies, where out of 55 companies registered only 12, or 21 per cent., remain in existence. Of the banking houses established, only 41 per cent. remained, and of 31 insurance companies formed, only 11 remained up to the date of last return. As to the 504,000,000*l.* supposed to have been invested by these large companies, those of them now remaining have an aggregate nominal capital scarcely exceeding 180,000,000*l.* The remainder is gone; that is, a large proportion (nearly 100,000,000*l.*), which was really never more than on paper, was withdrawn, the schemes having been abandoned. 160,000,000*l.* was the nominal capital of those winding up, and 60,000,000*l.* more may be considered as no longer existing, being the capital of those companies which, by having filed no returns, are supposed either to be no longer in existence, or to be in a state of exhaustion.

VIII.—*Companies' Capital.*

The introduction of limited liability was strongly advocated on the grounds that it would bring additional capital into commerce; that it would favour the enterprise of men of talent with insufficient capital; that, although in London and other large and wealthy cities, there is little appearance of want of means among those deserving credit or of capital for any useful undertaking, still, even in them, capital is not distributed or employed so beneficially as it would be if partnerships with limited liability were authorised by law; and that it would lead to the application of capital in commercial adventures which is now withheld from them by reason of the unlimited liability which engaging in them imposes. How far have these objects been realised within the last thirteen years? From 1863 to 1868 inclusive, the aggregate nominal capital of the companies established amounted to 893,000,000*l.* What proportion of this capital has been imported into trade from without? The statistics of joint stock companies afford us no help to the solution of this interesting question, but certainly there is no reason to believe that other branches of business suffered from want of capital, or that there has been any shifting of capital from one enterprise to another. The probabilities are, that a considerable portion has been contributed by annuitants in the public funds, and by holders of other descriptions of property paying a low rate of interest. A diminution is certainly observable in the number of persons entitled to various amounts of dividends, especially of sums not exceeding 50*l.*, both in the public funds and in the savings banks, as will be seen from the following comparison of 1857 with 1868:—

PUBLIC FUNDS.		1857.	1868.
Number of persons entitled to dividends not exceeding 5 <i>l.</i>		224,276	205,806
" " above 5 <i>l.</i>		44,083	42,196
		268,359	248,002
SAVINGS BANKS.			
Number of depositors in old savings banks, 1 <i>l.</i> and not exceeding 5 <i>l.</i>	}	930,887	881,334

The number of depositors in post-office savings banks should be added for the year 1868, but we have no specific returns from those banks of the number of depositors according to amount. Very many, indeed, have been induced by the avidity of getting larger profits to withdraw their savings from safer deposits in the banks or in the funds, in many cases it is to be feared only to lose the whole of their possession.

Let it not be imagined, however, that anything like 900,000,000*l.* has been employed by such companies. The "Economist," in its annual financial history, states that from 1863 to 1866, the amount of capital authorised was 373,000,000*l.*, and that of this 268,000,000*l.* was offered, and 35,600,000*l.* deposited. Supposing the amount of authorised capital to represent what is termed nominal capital, that the capital offered consisted of the amount of the shares taken, and that the amount deposited meant the amount of calls made or about to be made, it would follow that about 10 per cent. of the nominal capital was paid or *bonâ fide* invested in the various undertakings. If this be so, then surely the 35,600,000*l.*, spread over four years, does not seem a very extraordinary amount, or such as necessarily to cause a panic in the country. In truth, the amount of commitments or of liabilities incurred by these enterprises is immensely less than it seems. A company is brought out with 1,000,000*l.* of capital in 50,000 shares at 20*l.* each, in which probably 1,000 shares are taken, and a call made of 2*l.* to 5*l.* In that case what seems a commitment of 1,000,000*l.* comes in fact to be an investment of some 2,000*l.* to 5,000*l.* The practice of advertising a large nominal capital, often out of all proportion to the amount *bonâ fide* subscribed or required, which obtains in small as well as in large companies, is wrong in the extreme, and is tantamount to making unauthorised use of names of great responsibility or wealth. No capital should be allowed to be advertised but what is required and received. If more is wanted subsequently, it is always open to the company to resort to a fresh issue of shares. The moral effect also of parading extraordinary investments entirely of a fictitious character in this or that kind of enterprise at home and abroad, often greatly intensifies distrust and fear in times of troubles and panics. And even the principle of limited liability has somewhat suffered of

late, in consequence of the practice of not only putting forth a fictitious amount of nominal capital, but of issuing shares for amounts far exceeding what may be required for the business. In the heat of speculation, many do not realize that, beyond the amount paid up in a share there is a considerable residuum of liability, which in cases of failure may prove disastrous in the extreme. Far better would it be if the negotiation of shares for any amount beyond what has been paid up was rendered illegal. A step in this direction has been taken by the Companies Act of 1867, which authorises any company by special resolution to reduce its capital and shares, and we trust that the principle may be extended, and that it may be followed up by some stringent legislation,* remedying what is at once an abuse and a grievance among the whole body of shareholders. Every facility, on the other hand, should be given to companies having their capital divided into shares, to transfer them as easily as possible, and it was wisely enacted by the Act of 1867, that when the shares are paid in full they may be transferred to bearer. It is much to be regretted that the heavy stamp duty, of an amount equal to three times the amount of *ad valorem* stamp duty chargeable on a deed transferring the share, if the consideration for the transfer were the nominal value of such share, now hinders the full circulation of this species of commercial capital.

By reference to the table of the number of companies in relation to the amount of capital, the proportion of new companies formed from 1856 to 1868, was as follows:—

		Percentage.
Not known	47	0'62
Not exceeding 5,000 <i>l.</i>	2,059	29'18
Above 5,000 <i>l.</i> and not exceeding 10,000 <i>l.</i>	913	12'95
" 10,000 <i>l.</i> " 50,000 <i>l.</i>	2,148	30'45
" 50,000 <i>l.</i> " 100,000 <i>l.</i>	794	11'28
" 100,000 <i>l.</i> " 500,000 <i>l.</i>	736	10'45
" 500,000 <i>l.</i> " 1,000,000 <i>l.</i>	218	3'08
" 1,000,000 <i>l.</i>	141	1'99
	7,056	100'00

The great bulk of companies formed have a small capital. Full 73 per cent. of all the companies had either no subscribed capital, or a capital less than 50,000*l.*

IX.—*Limited and Unlimited Liability.*

Although, as we have seen, the principle of limited liability was only adopted in 1856, it had been the practice of the Board of Trade, for a considerable time before, to grant charters of incorporation with such limitation of liability. The cases where the Board of Trade considered that properly justified such a concession were the following:—

1st. Where the object for which the association is formed is of a hazardous character, in which many individuals may be disposed to risk moderate sums, the aggregate of which may constitute a large sum sufficient for the undertaking, but in which a single capitalist, or two or three under an ordinary partnership, would be unable or unwilling to engage. The working of mines was an example of this species of adventures.

2nd. Where the capital required is of so large an amount that no single partnership could be expected to support the expense, as in the case of canals, railways, docks, and works of that description.

3rd. Where no great advance of capital but extended responsibility is desirable, as in the case of assurance companies; and,

4th. Where the object sought can only be effected by a numerous association of individuals, such as the formation of literary societies, charitable institutions, and similar bodies.

It was objected to the practice of granting charters, that the method of allowing limited liability in some cases and refusing it in others was exceedingly invidious, that the cost of obtaining a charter was considerable,* and that a long time passed before such

* The expense was also great. The fees paid for a charter to the Privy Council and to the Council of the Board of Trade were as follows:—

<i>In an Ordinary Case—</i>		£	s.	d.
Attorney and Solicitor-General's fees.....		24	3	—
Fees at Privy Council Office		6	5	—
„ Home Office		313	7	4
„ to Board of Trade counsel		58	5	—
		402	0	4

<i>In a Banking Case—</i>		£	s.	d.
Attorney-General for reporting the charter		7	7	—
Solicitor-General		6	6	—
Board of Trade counsel's fees on draft deed and petition		50	8	—
„ in settling the charter		22	—	—
Fees paid to counsel and law officers, in order to ascertain whether the company had power to make bye-laws.....		37	13	—
Public fees in the Secretary of States Office and Great Seal Patent Office.....		17	6	—
Consolidated fund.....		71	18	2
Lord Chancellor's dividend fee		16	13	2
Gentlemen of the chamber.....		5	5	—
Sealer.....		9	19	6
Porter.....		—	10	6
Private seal		7	5	—
The Hanaper.....		69	6	8
Deputy		9	19	6
Engrossing charter on ornamental skin.....		10	18	2
Copy thereof for the Lord Chancellor to sign as approved....		2	10	—
Boxes		1	11	6
Stamps		350	2	—
Her Majesty's Attorney-General with the Queen's warrant....		238	17	—
Engrossing clerk		17	17	—
Stamps		1	10	—
		955	3	2

charters could in any case be obtained. From 1837 to 1855, 163 applications were made to the Board of Trade praying for grants of charters with limited liability, and of these 97 were granted and 60 refused or delayed. From 1844 to 1853 there were, moreover, passed 135 Acts for the incorporation of companies with the same powers of limited liability. The principle was in effect established, but the practice differed immensely, especially as regards colonial banks, some of which were formed with liability limited to the amount of the shares, others with a liability limited to twice or three times the amount of the subscribed capital.

It was time, indeed, to establish a more consistent and uniform legislation, and the Act of 1856 introduced quite a new era in the history of joint stock companies. From 1856 to 1868 inclusive, there were formed in the United Kingdom 7,056 companies, and of these 6,960 were with limited, and only 96 with unlimited liability, and of 169 mining companies registered within the Stannaries 162 were with limited liability, and only 7 with unlimited. To see how completely has the limited liability supplanted the unlimited, we have only to glance over the following table, showing the amount of capital respectively invested in the two systems, as much as 98 per cent. of the whole nominal capital being invested in the one, and only 2 per cent. in the other :—

Year.	Number of Companies.	Total Nominal Capital.	Limited Liability.		Unlimited Liability.	
			Number of New Companies.	Nominal Capital.	Number of New Companies.	Nominal Capital.
		£		£		£
1856	227	14,720,486	222	14,657,486	5	63,000
'57	392	20,969,230	386	20,901,030	6	68,200
'58	301	29,287,374	298	29,227,374	3	60,000
'59	326	13,516,960	320	13,417,960	6	99,000
1860	409	17,818,510	401	17,752,785	8	65,725
'61	479	24,613,084	474	24,542,884	5	70,200
'62	502	68,092,103	500	68,042,103	2	50,000
'63	760	137,356,138	748	135,295,038	12	2,060,200
'64	975	235,762,912	970	234,456,412	5	1,806,500
1865	1,014	203,725,576	1,002	201,539,865	12	2,185,711
'66	754	74,643,998	745	73,309,990	9	1,334,008
'67	469	28,545,948	455	27,461,148	14	1,084,800
'68	448	33,657,482	439	32,572,982	9	1,084,500
	7,056	893,159,601	6,960	893,177,957	96	9,531,844

X.—*The Partnership Laws of France.*

In France, all partnerships and companies must be registered. The French code of commerce recognizes the existence of three

descriptions of partnerships, viz., 1st, in collective name, corresponding to our ordinary private partnerships; 2nd, in commandite, consisting of one or more managing partners with unlimited liability, and one or more partners with limited liability; and 3rd, anonymous partnerships, similar to our public companies, requiring for their constitution the authority of a decree. In 1856, however, a special law was enacted relative to commandite partnerships by shares, providing that they may not be held definitively formed till after the entire capital has been subscribed, and a fourth of the shares paid up, the fulfilment of such conditions being duly proved by the managing partners. The shares of such partnerships are transferable to bearer, but the original shareholders remain responsible to the whole amount of these shares. Further, with a view to secure to the members themselves the due bringing in of the prescribed amount, a meeting of shareholders must be summoned to certify the payment of all the capital subscribed before the partnership is held definitively formed. A committee of inspection of five shareholders is then and there formed to watch over the affairs of the partnership, and to make an annual report to the shareholders. The gérants are, however, the usual instruments of all the operations of the partnership. Besides this law, in 1863,* following our own legislation on the subject, a fourth description of partnerships was allowed, called partnerships with limited liability, being a kind of free anonymous companies, applicable only where the capital exceeds 20,000,000 frs. But this restriction as to capital, having been found to operate against the success of the law, was abolished in 1867.† A table of the number of partnerships registered in France from 1844 to the present time is appended, and it will be seen, that during the twenty-four years, there were formed in France 78,005 partnerships, besides 408 anonymous companies. That of the 78,005 partnerships, 60,731, or 78 per cent., were in collective name, or ordinary partnerships; 12,177, or 15½ per cent. were commandite without transferable shares; 4,759, or 6 per cent., were commandite, with transferable shares; and 338 were new limited liability partnerships. Of the 408 anonymous companies formed by decree, 149 were for insurance purposes, some as mutual and some as proprietary companies. The number of partnerships formed in France, from year to year, exhibits a remarkable steadiness and progress. In the years 1848 and 1849, years of revolution, there was a considerable diminution in their number, but otherwise the fluctuation was not very sensible. Comparing the years 1844 and 1867, there was an increase of 63 per cent. in the number of ordinary partnerships, and an increase of 57 per cent. in the nominal commandite,

* Law of June, 1863.

† Law of 22nd July, 1867.

but an actual decrease for many years past in commandite partnerships with transferable shares, showing that the great mass of partnerships is still formed with unlimited liability.

XI.—*Limited Liability.*

The Companies Act of 1867 sanctioned a new principle in joint stock companies, by allowing companies to be formed of a mixed character, the directors or managers having an unlimited liability, and the shareholders a limited one. This is the principle of the *commandite* partnership, and to my mind it is far preferable to either a universally unlimited or universally limited liability in both directors and shareholders. It is just and reasonable that shareholders, who take no part in the management, who cannot exercise any influence on the amount of confidence awarded to the firm beyond what results from the amount of capital invested, should have a liability limited to the amount of their shares. But it is equally just and reasonable that those who take upon themselves the direction of such business, whose names have a considerable influence on the credit given to the company, and upon whose management the entire success of the business depends, should have an unlimited liability. How many blunders, how many acts of daring, shall I say unscrupulous daring, would never be committed or attempted were the directors liable for the entire of their property. The Act of 1867 does not go far enough in allowing such mixed companies to be formed; and it is a serious question whether the whole legislation on limited liability was not erroneously conceived. It is now nearly twenty years since I gave evidence to a Committee of the House of Commons in favour of *commandite* partnerships; and I agree very much with my friend, Mr. John Howell, in his pamphlet on "Partnership Law Legislation," that having regard to "its consonance with natural justice, its great power of developing "genius and inventive talent, especially in manufactures—into "which art enters largely—the value it gives to character, the "means it affords of introducing different classes of the community to each other, and the vitality it imparts to trade," the principle of *commandite* is well entitled to the serious attention of of the legislature.

XII.—*Winding-up of Companies.*

A considerable number of joint stock companies, after a brief and chequered existence, end by being wound up either voluntarily or under the supervision of the Court of Chancery. The tables show, that of 6,995 companies registered since 1856, as many as 1,675, or 23 per cent., were thus terminated. And by a special return of the

number of companies so wound up,* it appears, that from August, 1862, to July, 1868, 480 companies were before the courts, and 445 of them made proper returns. The summary given of the return does not consist of consecutive facts, but shows that 419 companies had an aggregate nominal capital of 138,654,272*l.*; that 382 companies had a paid-up capital, as far as known, of 24,348,027*l.*; that 357 companies had liabilities amounting, as far as ascertained, of 74,482,421*l.*; and, that the expenses of winding up, as far as ascertained, of 207 companies, or of scarcely half of the total number, amounted to 630,285*l.*, giving an average expenditure of upwards of 3,000*l.* per company. On examination of the return, it will be found, that the life of many of these unfortunate companies is very short indeed, many of them having had scarce eighteen months existence. Alas! a very short trial is often enough to disabuse the mind of shareholders of many pleasant fancies. Yet in many cases the expenses of liquidation were extremely heavy. The Asiatic Banking Corporation was registered in February, 1864, came to grief in November, 1866, and 33,000*l.* were expended up to the date of the return in winding up. The new company of Overend, Gurney, and Co., was registered on the 12th July, 1865, came to grief on the 23rd July, 1866, with liabilities amounting to nearly 19,000,000*l.*, and up to the date of the return 64,772*l.* were expended in winding it up. But a still greater evidence of the immense increase of winding-up concerns in the Court of Chancery in England may be gathered from the "Judicial Statistics." From 1859 to 1868 the operation of the court on joint stock companies, has been as follows:—

	Number of Petitions under the Winding-up Acts		Number of Debts Claimed and Adjudicated.	Amount of Debts Proved.	Amount of Calls Made.	Dividends Paid to Creditors.
	To the Lord Chancellor.	To the Master of the Rolls.				
1859....	20	2	—	£ —	£ 79,092	—
'60....	14	6	245	727,362	733,869	—
'61....	10	9	5,772	873,123	123,221	276,573
'62....	17	11	1,857	1,329,970	1,024,671	270,915
'63....	28	31	1,166	1,953,259	473,075	253,049
'64....	33	42	3,462	1,056,103	614,153	393,276
'65....	47	90	8,933	3,626,735	2,394,613	1,354,076
'66....	166	75	9,909	9,613,909	2,548,690	3,279,017
'67....	170	83	10,636	12,490,346	4,497,831	7,310,339
'68....	116	62	11,584	6,979,550	8,537,123	2,963,337

From whatever side we look at these facts, they are certainly most unsatisfactory. An increase in ten years of the number of

* 104 and 104—1 of 1869.

petitions from 22 in 1859 to 241 in 1866, and 178 in 1868; an increase in the number of debts claimed from 245 in 1860 to 11,584 in 1868, and of calls made from 79,092*l.* in 1859 to 8,537,123*l.* in 1868, denote losses of an enormous amount. The disproportion between the amount of debts proved and the amount of calls made, and between the amount of calls and of dividends paid to creditors is also very great. And what shall I say of the delay in winding up? The return already referred to shows that after six years only 207 out of 480 companies were finally liquidated, to enable the courts to give the expenses of winding them up. The return demanded was for companies wound up, as well as for companies winding up, but the cases finally settled were very few. Would not a simpler tribunal than the Court of Chancery be better adapted for the winding-up of joint stock companies? Of 423 companies before the Court of Chancery in England, 225 were before the Master of the Rolls, 55 before Vice-Chancellor Stuart, 73 before Vice-Chancellor Malins, and 70 before Vice-Chancellor James. One single tribunal, like the tribunals of commerce in continental countries, would seem to me much simpler and more effective than the present practice. Besides the expensiveness and delay connected with proceedings in the Court of Chancery, it is complained that at present any single discontented shareholder, however little interested in the concern, may present a petition for winding up. Nay more. As it is, any shareholder has the power to prosecute a director criminally, and thereby to place not only the parties themselves but all the affairs of the concern in a condition of utter discomfiture. Should not the exercise of such powers devolve exclusively on the State, and be performed by a public prosecutor? In the Companies Act of 1862 it is provided, that the Board of Trade may appoint an inspector to examine the affairs of the company, upon the application of members holding not less than one-fifth part of the whole shares of the company, and, in the case of a banking company, of members holding not less than one-third part of the whole shares. Would it not be desirable to establish some such regulations as respect applications for winding up, or any proceedings of a criminal nature? A regulation like this would not only impart confidence in trade, but also protect the company and every member or director thereof from hostile if not capricious and mischievous acts. The legislation on this subject is in many respects evidently imperfect.

XIII.—*Registration and its Effects.*

The intent of the legislature in establishing a registration of joint stock companies being as far as possible to secure the public against fraud, it is interesting to inquire how far has the object been

attained by the existing regulations, or in what direction is further legislation required. It may be objected, that any interference of the legislature in requiring such registration is uncalled for; that it is opposed to the general principle of *laissez faire*; that no company should be clothed with a semi-official character which it does not really possess as a voluntary association; and that no return or statement made by the parties is worth much unless previously tested. Mr. John Stuart Mill, in his Chapter on Partnership, says: "The law is warranted in requiring from all joint stock associations with limited responsibility, not only that the amount of capital on which they profess to carry on business should either be actually paid up or security given for it (if, indeed, with complete publicity, such a requirement would be necessary), but also that such accounts should be kept accessible to individuals, and, if needful, published to the world, as shall render it possible to ascertain at any time the existing state of the company's affairs and to learn whether the capital which is the sole security for the engagements into which they enter, still subsists unimpaired: the fidelity of such accounts being guarded by sufficient penalties. When the law has thus afforded to individuals all practicable means of knowing the circumstances which ought to enter into their prudential calculations in dealing with the company, there seems no more need for interfering with individual judgment in this sort of transaction, than in any other part of the private business of life."* So long as the interference of the State in such matters is more judicial than administrative, and so long as it is restricted to providing of means for the due publication of the conditions on which any company may seek public co-operation, and to the putting of proper checks to the publication of false statements, the objection to Government interference cannot be really maintained.

The question of registration has acquired considerable importance in connection especially with insurance companies. The Select Committee of the House of Commons on assurance associations in 1853, after careful inquiry into the whole question, recommended that it should be imperative upon each company to make a complete investigation into its affairs at least once in five years, which should show a complete valuation of their risks and liabilities, and of their assets to meet the same. It further recommended that all such valuations, together with a periodical statement giving the annual receipts and expenses, the amount of liabilities and assets, the amount of capital and the table of mortality, should be duly registered. And after many years this matter has been again taken

* "Principles of Political Economy," vol. ii, p. 481.

up last year, when a bill was introduced by the Right Hon. Stephen Cave, Mr. Bazley, and Mr. Russell Gurney for nearly the same object. A general desire certainly exists that something should be done to protect the public against fraud, and a justification for it is found in the fact that insurance companies stand in the character not only of contractors as regards the assured personally, but of trustees as regards future beneficiaries, who are in most cases widows and orphans. Assuming that a corporation, whether small or large, is a creature of the law, I see no reason why the law, in conferring the privileges incident thereto, should not impose conditions which, without unduly interfering with the freedom of business, shall afford sufficient security to the public. The Stock Exchange, a purely voluntary association, will not grant a settling-day for bargains in the shares of a new company until all the circumstances of the company are set forth before the committee, nor will it allow such shares to be quoted, until the committee have duly examined all the documents required and found them to their satisfaction. And it should be remembered that of the large number of companies annually formed only a very small proportion, and in most cases only select companies, are admitted at the Stock Exchange either for a settling-day or for quotation. How much more necessary is it that some precautions should be adopted by the State in granting the benefits of incorporation to the many companies yearly started for all manner of objects. The principle and the expediency of registration have been in fact admitted, both in theory and practice, and all that is wanted now is to make it more general and effective. It is not only, however, for insurance companies that better provisions are required; any distinction, in fact, as regards the class of companies would be both invidious and undesirable. A general law is far preferable. Nor do I see any reason for limiting the privileges of incorporation to the mystical number of seven persons and upwards. To my mind all partnerships and companies wishing to act in a corporate capacity, or as a firm, should be bound to register the names of all the partners in the firm. In the case of partnerships where the capital is not divided into shares, the registration should be of all the partners. In the case of companies the registration should be limited to the names of the directors.

But let not the certificate of incorporation be granted merely upon the production of the memorandum of association. In the case of a common partnership the deed, duly signed and authenticated, should be produced. In the case of a company the allotment of a certain proportion of shares duly paid up, as an evidence of the *bond fide* constitution of the company, should be necessary. The committee of the Stock Exchange will order the

quotation of a new company on the official list only when two thirds of the shares, exclusive of those reserved or granted in lieu of money payments to concessionaires, owners of property, or others, have been applied for and unconditionally allotted, and only where the articles of association restrain the directors from employing the funds of the company in the purchase of its own shares. A somewhat similar condition might by law be established in connection with the registration and incorporation of any new company. It seems, moreover, absolutely necessary that the registrar of joint stock companies should be empowered to take steps for securing, as far as possible, the authenticity of the signatures to the deed of partnership or of settlement, as well as to enforce compliance with the clauses respecting publication of returns, and he should have power to sue the parties for neglect, and even to cancel the name of a company from the register where he has reason to believe, after notice given and published, that the same is extinguished. I doubt, however, whether it would be advisable to require the publication of the balance sheet, which would be only confusing, from the different modes in which the accounts of companies are necessarily kept; and I would demur to the idea of empowering the registrar to examine the books of companies in order to verify the state of affairs of any company. No legislative safeguard can ever render effective guarantee against frauds. Full publicity of information is all that can be aimed at. To that effect let every thing be done to place the information within the reach of the public. Let more use be made of advertisements, and let the registrar of joint stock companies, instead of confining himself to a return, publish annually a report of his proceedings, with all the facts returned from the companies and corporate partnerships in the manner now done by other public departments.

XIV.—*Conclusions.*

To bring the observations made throughout this paper in a practical shape before the Society, the conclusions which are suggested may be summed up as follows:—

1. That the number of joint stock companies yearly registered since 1844, shows an absolute increase, from an average of 337 from 1844 to 1855, to an average of 543 from 1856 to 1868, though relatively to the amount of exports of British produce and manufactures, the proportion was 4·66 companies provisionally registered, and 1·11 completely registered per 1,000,000*l.* exports in 1844 to 1855; and 3·69 companies registered per 1,000,000*l.* exports in 1856-68.

2. That 73 per cent. of the companies registered from 1844 to 1855, and 18 per cent. of those registered from 1856 to 1868, giving

a total average of 39 per cent., were abandoned before commencing business.

3. That of 5,811 companies constituted from 1856 to 1868, 2,831 were wound up or made no return, or in the proportion of 49 per cent., the proportion varying from 36 per cent. in the case of banking and finance companies, to 16 per cent. in the case of gas companies.

4. That of 7,056 formed from 1856 to 1868, only 2,918 remained in existence at the close of 1868, being in the proportion of 41 per cent., the maximum of instability appearing to obtain in companies for banking, finance, insurance, and mining, and the minimum instability in companies for gas and water.

5. That of 300 companies formed with a nominal capital of 1,000,000*l.* and upwards, representing an aggregate nominal capital of upwards of 500,000,000*l.*, 60 with a capital of 100,000,000*l.* were abandoned before starting; 87 with a capital of 160,000,000*l.* were wound up; 2 obtained Acts of Parliament; 29 with a capital of 60,000,000*l.* filed no return; and 122 with a nominal capital of 180,000,000*l.* are supposed to be still in existence.

6. That of the nominal capital supposed to be possessed by the joint stock companies, scarcely 10 per cent. can be estimated to be the amount actually paid up, the practice of advertising a large nominal capital being alike legally wrong and morally inexpedient and injurious.

7. That with a view to promote the circulation of capital invested in such companies, facility should be given to the transfer of shares fully paid up.

8. That decided preference appears to be given to limited liability, as evidenced from the fact that out of 7,056 joint stock companies, with a nominal capital of 893,000,000*l.*, as many as 6,960 or 98 per cent. were constituted with limited, and 96 companies with a nominal capital of 9,500,000*l.*, or 2 per cent., with unlimited liability.

9. That having regard to the disastrous dissolution of a very large number of joint stock companies with limited liability, it is expedient to reconsider whether the *commandite* principle, where the managing partners or directors are always liable to the full extent of their property, is not preferable to the uniform systems of limited or unlimited liability in both shareholders and directors.

10. That the winding-up of joint stock companies in the Court of Chancery, being most expensive, uncertain, and attended by much delay, it would be expedient to consider whether a cheaper and more expeditious tribunal, upon the example of the tribunals of commerce, should not be charged with such jurisdiction.

11. That no suit for the winding-up of joint stock companies

should be maintained in any court, unless at the instance of at least a fourth of the shareholders or creditors, and that no criminal prosecution should be allowed against any of the directors, unless with the consent of the law officers of the Crown, and upon demand of at least of a fourth of the shareholders or creditors.

12. That the registration of joint stock companies is at present on a most unsatisfactory foundation.

13. That the privileges and rights of incorporation should be granted to any number of persons wishing to act in a collective or corporate capacity, but only on condition of the registration of the deed in a common partnership, and of registration and the allotment of at least half of the shares with a fourth paid up in cases of companies of seven persons and upwards.

14. That it is not desirable to make a special legislation for the registration of insurance companies, but that it should be in the power of the registrar of joint stock companies to prepare distinct schedules for returns applicable to different classes of companies, according to the character of their respective business.

15. That power should be given to the registrar to enforce the fulfilment of the conditions of registration, and to withdraw the privileges of incorporation, or to wipe off from the register any partnership or company neglecting for a given time to make the required returns.

16. That the registrar of joint stock companies should make an annual report on the work of his office.

APPENDIX.

TABLE A.—Companies Provisionally and Completely

Nature of Company.	1844.		1845.		1846.		1847.		1848.		1849.	
	P. E.	C. E.	P. E.	C. E.	P. E.	C. E.	P. E.	C. E.	P. E.	C. E.	P. E.	C. E.
1. Assurance companies, including all branches of insurance	4	—	44	5	24	15	27	19	22	16	41	15
2. Railway companies, including companies for subsidiary purposes connected with railways	81	—	1,149	4	59	12	22	3	5	1	5	2
3. Gas companies	7	—	60	17	32	28	26	23	20	21	15	16
4. Companies for all other public works	13	—	72	2	26	4	11	6	4	1	25	3
5. Mining companies, including gold, copper, lead, and coal mining, and stone and slate quarrying, and smelting companies	—	—	24	6	12	5	11	6	10	4	21	7
6. Companies for conducting manufactures, working patent inventions, &c.	—	—	—	9	—	10	22	9	6	4	11	6
7. Shipping and steam navigation companies	3	—	24	5	10	5	8	6	6	3	6	2
8. Land conveyance companies other than railways	—	—	—	—	14	1	9	2	2	—	1	—
9. Fishing companies	—	—	—	—	—	1	—	—	3	—	1	1
10. Trading	—	—	—	—	—	4	7	1	2	2	—	1
11. Companies for the use and occupation of land, for aiding emigration, and for improving the dwellings of the poorer classes	1	—	9	—	8	—	6	—	2	—	1	—
12. Companies for establishing buildings of a public character	4	—	8	1	6	4	13	5	10	6	18	12
13. Building companies	1	—	12	4	11	9	10	4	5	—	3	—
14. Investment and loan companies	1	—	20	4	14	10	11	5	8	2	5	2
15. Miscellaneous companies, not reducible under any of the foregoing heads	4	—	98	—	76	4	32	9	18	4	12	1
Total	119	—	1,520	57	292	112	215	98	123	63	165	68

Note.—P. E. provisionally registered,

APPENDIX.

Registered, from 1844 to 1853, both inclusive.

1850.		1851.		1852.		1853.		1854.		1855.		Total.		Nature of Company.
P.R.	C.R.	P.R.	C.R.	P.R.	C.R.	P.R.	C.R.	P.R.	C.R.	P.R.	C.R.	P.R.	C.R.	
28	12	39	18	57	26	34	23	51	36	40	19	411	203	1. Assurance companies, including all branches of insurance
12	—	23	—	91	1	87	3	42	2	29	4	1,605	32	
19	17	22	12	44	23	52	40	30	35	34	21	361	253	3. Gas companies
24	4	28	2	38	8	21	4	23	6	20	3	305	43	
13	4	25	12	54	16	31	18	20	16	14	4	235	98	5. Mining companies, including gold, copper, lead, and coal mining, and stone and slate quarrying, and smelting companies
14	1	27	5	36	10	24	9	28	10	41	8	209	81	
7	5	11	1	27	6	20	10	5	2	14	3	141	48	7. Shipping and steam navigation companies
—	—	6	—	9	3	3	—	1	—	1	—	46	6	
3	—	—	—	—	—	3	—	—	—	—	—	10	2	9. Fishing companies
—	2	2	—	3	1	8	3	4	5	10	2	36	21	
2	—	1	—	2	—	10	—	1	—	3	1	46	1	11. Companies for the use and occupation of land, for aiding emigration, and for improving the dwellings of the poorer classes
13	5	8	9	12	9	18	7	16	13	21	13	147	84	
3	1	—	1	2	1	5	—	—	—	—	—	52	20	13. Building companies
6	5	5	2	9	1	2	3	—	—	9	2	90	36	
15	1	14	1	30	5	21	4	18	7	17	1	355	37	15. Miscellaneous companies not reducible under any of the foregoing heads
159	57	211	63	414	110	339	124	239	132	253	81	4,049	965	

C. R. completely registered.

TABLE B.—Companies Registered and Abandoned.

Year.	Number of Companies Provisionally Registered.	Abandoned.	Number Completely Registered.	Per cent.
1844.....	119	119	—	—
'45.....	1,520	1,463	57	96
'46.....	292	180	112	61
'47.....	215	117	98	54
'48.....	123	60	63	48
'49.....	165	97	68	58
'50.....	159	102	57	64
'51.....	211	148	63	70
'52.....	414	304	110	73
'53.....	339	215	124	63
'54.....	239	107	132	44
'55.....	253	172	81	67
	4,049	3,084	965	76

Year.	Number of Companies Registered.	Number Abandoned.	Number Remaining.	Per cent.
1856.....	227	61	166	26
'57.....	392	123	269	31
'58.....	301	111	190	37
'59.....	326	108	218	32
'60.....	409	104	305	25
'61.....	479	135	344	28
'62.....	502	112	390	22
'63.....	760	190	570	25
'64.....	975	198	782	20
'65.....	1,014	77	937	7
'66.....	754	28	726	3
'67.....	469	1	463	02
'68.....	448	2	446	04
	7,056	1,245	5,811	18
1844-55	4,049	3,084	965	76
'56-68	7,056	1,245	5,811	78 '8
	11,105	4,329	6,776	39

Note.—Average number of companies per year formed:—

1844-55	337
'56-68	543

TABLE C.—Companies FORMED and REGISTERED under the JOINT STOCK COMPANIES ACTS, 1856-57 (19 and 20 Vict., cap. 47, and 20 and 21 Vict., cap. 14), as LIMITED Companies.

	Registered.	Abandoned.	Wound up by Court.	Wound up Voluntarily.	Winding up Voluntarily.	Obtained Act of Parliament.	Filed no Returns, &c.*
1. Assurance companies (including all branches of insurance)	—	—	—	—	—	—	—
2. Banking and finance companies	33	8	1	5	1	—	6
3. Railway companies (including companies for subsidiary purposes connected with railways)	73	29	4	7	3	5	4
4. Gas companies (including companies for supplying gas and water)	316	22	5	14	2	20	9
5. Water companies	40	10	—	2	—	5	2
6. Telegraph	34	15	—	2	1	4	5
7. Companies for other public works	25	5	1	3	1	1	3
8. Mining companies (including gold, copper, lead and coal mining, stone and slate quarrying, and smelting companies)	621	195	54	179	37	—	85
9. Cotton growing and spinning companies	145	17	7	37	5	—	4
10. Companies for conducting manufactures, working patent inventions, &c.	326	145	29	75	9	—	44
11. Printing and publishing (including newspaper) companies	70	39	—	11	3	—	17
12. Shipping and steam navigation companies	103	29	8	22	6	1	10
13. Ship and boat building, docks, &c., companies	12	4	3	3	2	—	—
14. Land conveyance companies, other than railways	35	16	2	2	—	—	12
15. Fishing companies	15	6	1	7	—	—	—
16. Trading companies (including flour, bread, brewing, distilling, and tailoring companies)	155	43	12	30	10	—	17
17. Companies for the purchase and sale, use and occupation of land, for aiding emigration, and for improving the dwellings of the poorer classes	53	12	2	10	1	1	5
18. Companies for establishing buildings of a public character	166	23	1	26	2	—	10
19. Building companies	35	7	—	7	—	—	4
20. Investment and loan (including tontine) companies	117	43	6	21	3	—	12
21. Hotel, dining-rooms, restaurant, and club companies	60	20	9	7	2	—	13
22. Miscellaneous companies, not reducible under any of the foregoing heads	81	30	2	20	2	—	9
Total	2,515	724	147	490	90	37	271

* Since original registration, except in some cases, notice of registered office.

TABLE C *contd.*—Companies EXISTING PREVIOUSLY to the Passing of the JOINT STOCK COMPANIES ACTS, 1856-57, and SUBSEQUENTLY REGISTERED under those Acts as UNLIMITED Companies.

	Regis-tered.	Aban-doned.	Wound up by Court.	Wound up Volun-tarily.	Wind-ing up Volun-tarily.	Obtained Act of Parlia-ment.	Filed no Returns, &c.*
1. Assurance companies (including all branches of insurance)	—	—	—	—	—	—	—
2. Banking and finance companies	13	1	3	3	1	—	—
3. Railway companies (including companies for subsidiary purposes connected with railways)	2	—	—	—	—	—	7
4. Gas companies (including companies for supplying gas and water)	165	5	1	6	1	18	1
5. Water companies	13	2	—	—	2	2	—
6. Telegraph „	—	—	—	—	—	—	—
7. Companies for other public works.....	9	1	—	—	—	1	1
8. Mining companies (including gold, copper, lead and coal mining, stone and slate quarrying, and smelting companies).....	27	8	5	7	—	—	1
9. Cotton growing and spinning companies.....	6	2	—	2	—	—	—
10. Companies for conducting manufactures, working patent inventions, &c.	24	8	—	6	—	—	—
11. Printing and publishing (including newspaper) companies	—	—	—	—	—	—	—
12. Shipping and steam navigation companies.....	13	4	—	5	1	—	—
13. Ship and boat building, docks, &c., companies	2	—	—	1	1	—	—
14. Land conveyance companies, other than railways (including tramways)	—	—	—	—	—	—	—
15. Fishing companies	—	—	—	—	—	—	—
16. Trading companies (including flour, bread, brewing, distilling, and tailoring companies).....	13	2	2	—	—	—	—
17. Companies for the purchase and sale, use and occupation of land, for aiding emigration, and for improving the dwellings of the poorer classes	1	—	—	—	1	—	—
18. Companies for establishing buildings of a public character	72	3	1	3	—	1	—
19. Building companies	8	2	—	1	—	—	—
20. Investment and loan (including tontine) companies	16	2	1	4	1	—	—
21. Hotel, dining-rooms, restaurant, and club companies.....	1	—	—	—	—	—	—
22. Miscellaneous companies, not reducible under any of the foregoing heads	5	1	—	1	—	—	—
Total	390	41	13	39	8	22	3

* Since original registration, except in some cases, notice of situation of registered office.

TABLE D *contd.*—Companies EXISTING PREVIOUSLY to the Passing of the COMPANIES ACT, 1862, and SUBSEQUENTLY REGISTERED under that Act as LIMITED Companies.

	Registered.	Abandoned.	Wound up by Court.	Wound up Voluntarily.	Winding up Voluntarily.	Obtained Act of Parliament.	Filed no Returns, &c.*
1. Assurance companies (including all branches of insurance)	5	—	1	—	1	—	1
2. Banking and finance companies	5	—	—	—	—	—	—
3. Railway companies (including companies for subsidiary purposes not connected with railways)	—	—	—	—	—	—	—
4. Gas companies (including companies for supplying gas and water)	23	—	—	—	—	3	—
5. Water companies	—	—	—	—	—	—	—
6. Telegraph „	—	—	—	—	—	—	—
7. Companies for other public works	—	—	—	—	—	—	—
8. Mining companies (including gold, copper, lead and coal mining, stone and slate quarrying, and smelting companies)	11	—	—	1	1	—	1
9. Cotton growing and spinning companies	—	—	—	—	—	—	—
10. Companies for conducting manufactures, working patent inventions, &c.	2	—	—	1	—	—	—
11. Printing and publishing (including newspaper) companies	—	—	—	—	—	—	—
12. Shipping and steam navigation companies	1	—	—	—	—	—	—
13. Ship and boat building, docks, &c., companies	1	—	1	—	—	—	—
14. Land conveyance companies, other than railways (including tramways)	1	—	—	—	—	—	—
15. Fishing companies	—	—	—	—	—	—	—
16. Trading companies (including flour, bread, brewing, distilling, and tailoring companies)	2	—	—	—	—	—	—
17. Companies for the purchase and sale, use and occupation of land, for aiding emigration, and for improving the dwellings of the poorer classes	2	—	—	1	—	—	—
18. Companies for establishing buildings of a public character	2	—	—	—	—	—	—
19. Building companies	—	—	—	—	—	—	—
20. Investment and loan (including tontine) companies	1	—	—	—	1	—	—
21. Hotel, dining-rooms, restaurant, and club companies	—	—	—	—	—	—	—
22. Miscellaneous companies, not reducible under any of the foregoing heads	—	—	—	—	—	—	—
Total	56	—	2	3	3	3	2

* Since original registration, except in some cases, merely notice of registered office.

TABLE F.—*Classification of the Total Number of Companies FORMED,—1844-68.*

	1844-55.	1855-68.	Total.
Railway companies	1,605	186	1,791
Mining	235	1,419	1,654
Manufacture and patents	209	1,016	1,225
Gas	361	678	1,039
Insurance	411	190	601
Trading	36	539	575
Public buildings	147	364	511
Shipping and navigation	141	263	404
Public works	305	86	391
Investments	90	296	386
Use of land.....	46	265	311
Cotton growing	—	215	215
Printing	—	158	158
Building companies	52	74	126
Conveyance of land, &c.	46	79	125
Water	—	91	91
Telegraph	—	64	64
Shipbuilding	—	64	64
Fishing	10	45	55
Miscellaneous	355	77	732
Banking and finance	—	291	291
Hotels	—	296	296
	4,049	7,056	11,105

TABLE F continued.—*Number of Companies FORMED and ABANDONED.*

	Number Formed.	Number Abandoned.	Per Cent.
Printing	158	54	34
Telegraphs	64	20	32
Banking and finance	291	82	28
Land conveyance	79	21	26
Railway	186	50	26
Navigation	263	53	20
Investments	296	69	23
Public works	86	19	22
Manufacturers	1,016	214	21
Hotels	296	68	19
Miscellanies	377	63	17
Mining	1,419	259	18
Trading	539	90	16
Shipbuilding	64	12	18
Insurance	190	31	16
Fishing	45	7	15
Water	91	12	13
Use of land.....	265	29	11
Cotton growing	215	21	9
Public buildings.....	364	33	9
Building companies	74	7	9
Gas	678	41	6
	7,506	1,245	17

TABLE F *contd.*—*Number of Companies FINALLY CONSTITUTED and WOUND-UP.*

	Number Constituted.	Number Wound up and not Heard of.	Per Cent.
Banking and Finance	209	160	76
Insurance	159	97	61
Shipbuilding	52	35	67
Railway	136	59	58
Printing	104	61	58
Conveyance	58	34	58
Trading	449	256	57
Manufacture	802	450	56
Navigation	210	116	55
Fishing	38	23	55
Telegraph	44	23	52
Public works	67	35	52
Hotels	238	125	52
Miscellanies	314	122	39
Investments	227	99	43
Mining	1,160	721	40
Cotton	194	77	39
Land	236	90	38
Building companies	67	22	32
Public building	331	98	29
Water	79	14	17
Gas	637	102	16
	5,811	2,837	49

TABLE F *contd.*—*Number of Companies FORMED and REMAINING.*

	Number Formed.	Number Remaining.	Per Cent.
Gas	678	535	85
Water	91	65	72
Public buildings	364	233	66
Building companies	74	45	60
Land	265	146	55
Cotton	215	117	54
Investments	296	128	43
Miscellanies	377	192	51
Railways	186	77	41
Public works	86	32	37
Hotels	296	113	37
Fishing	45	17	37
Trading	539	193	35
Shipping	263	94	35
Manufacture	1,016	352	34
Assurance	190	62	32
Telegraph	64	21	32
Mining	1,419	439	30
Conveyance	79	24	30
Printing	158	43	27
Ship building	64	17	26
Banking and finance	291	49	16
	7,056	2,974	42

TABLE G.—CAPITAL of Companies FORMED, 1856-68.—Number of Companies
I. LIMITED.—Joint Stock Companies Act, 1856-57.

Amount of Nominal Capital.	1856.	1857.	1858.	1859.	1860.	1861.	1862.	Total.
1. Not known.....	—	3	—	—	—	—	—	3
2. „ exceeding 5,000l.	70	127	120	136	119	141	114	827
3. Above 5,000l. and not exceeding 10,000l.	24	68	45	40	50	83	56	384
4. „ 10,000l. „ 50,000l.	73	128	78	87	158	167	135	826
5. „ 50,000l. „ 100,000l.	31	28	24	28	35	51	48	245
6. „ 100,000l. „ 500,000l.	20	26	19	17	26	25	39	172
7. „ 500,000l. „ 1,000,000l.	4	4	6	1	4	5	14	38
8. „ 1,000,000l.	—	2	6	2	—	2	8	20
Total	222	386	298	320	401	474	414	2,515

II. UNLIMITED.—Joint Stock Companies Act, 1856-57.

Amount of Nominal Capital.	1856.	1857.	1858.	1859.	1860.	1861.	1862.	Total.
1. Not known.....	—	—	—	—	—	—	—	—
2. „ exceeding 5,000l.	3	1	1	2	4	2	—	13
3. Above 5,000l. and not exceeding 10,000l.	—	2	—	2	1	2	1	8
4. „ 10,000l. „ 50,000l.	2	3	2	1	3	1	—	12
5. „ 50,000l. „ 100,000l.	—	—	—	1	—	—	—	1
6. „ 100,000l. „ 500,000l.	—	—	—	—	—	—	—	—
7. „ 500,000l. „ 1,000,000l.	—	—	—	—	—	—	—	—
8. „ 1,000,000l.	—	—	—	—	—	—	—	—
Total	5	6	3	6	8	5	1	34

Number of PREVIOUSLY EXISTING Companies SUBSEQUENTLY

I. LIMITED.—Joint Stock Companies Act, 1856-57.

Amount of Nominal Capital.	1856.	1857.	1858.	1859.	1860.	1861.	1862.	Total.
1. Not known.....	—	—	—	—	—	—	—	—
2. „ exceeding 5,000l.	62	10	5	—	2	—	2	81
3. Above 5,000l. and not exceeding 10,000l.	24	3	2	—	2	1	1	33
4. „ 10,000l. „ 50,000l.	50	6	3	—	—	1	—	60
5. „ 50,000l. „ 100,000l.	17	2	—	1	—	—	—	20
6. „ 100,000l. „ 500,000l.	18	6	2	1	—	1	—	28
7. „ 500,000l. „ 1,000,000l.	1	—	—	1	1	—	1	4
8. „ 1,000,000l.	3	—	2	—	—	—	—	5
Total	175	27	14	3	5	3	4	231

II. UNLIMITED.—Joint Stock Companies Act, 1856-57.

Amount of Nominal Capital.	1856.	1857.	1858.	1859.	1860.	1861.	1862.	Total.
1. Not known.....	—	2	—	—	1	—	—	3
2. „ exceeding 5,000l.	165	25	6	1	—	1	2	200
3. Above 5,000l. and not exceeding 10,000l.	40	11	—	1	1	—	—	53
4. „ 10,000l. „ 50,000l.	64	8	1	—	1	2	—	76
5. „ 50,000l. „ 100,000l.	13	3	2	2	—	1	—	21
6. „ 100,000l. „ 500,000l.	17	7	4	1	1	—	—	30
7. „ 500,000l. „ 1,000,000l.	1	3	—	—	—	—	—	4
8. „ 1,000,000l.	—	3	—	—	—	—	—	3
Total	300	62	13	5	4	4	2	390

FORMED and REGISTERED, in each Year, under the Acts of 1856-57 and 1862.

I. LIMITED.—Companies Acts, 1862 and 1867.

1862.	1863.	1864.	1865.	1866.	1867.	1868.	Total.	Amount of Nominal Capital.
—	2	3	10	7	5	3	30	1. Not known
31	206	237	223	189	170	157	1,210	2. „ exceeding 5,000 <i>l.</i>
7	74	99	106	87	73	68	514	3. Above 5,000 <i>l.</i> and not exceeding 10,000 <i>l.</i>
28	221	247	288	267	124	139	1,299	4. „ 10,000 <i>l.</i> „ 50,000 <i>l.</i>
10	108	117	144	92	46	28	540	5. „ 50,000 <i>l.</i> „ 100,000 <i>l.</i>
5	85	185	158	87	26	31	557	6. „ 100,000 <i>l.</i> „ 500,000 <i>l.</i>
8	34	57	48	17	7	8	174	7. „ 500,000 <i>l.</i> „ 1,000,000 <i>l.</i>
2	26	45	30	9	4	5	121	8. „ 1,000,000 <i>l.</i>
86	748	970	1,002	745	455	489	4,445	Total

II. UNLIMITED.—Companies Acts, 1862 and 1867.

1862.	1863.	1864.	1865.	1866.	1867.	1868.	Total.	Amount of Nominal Capital.
—	2	—	5	3	2	2	14	1. Not known
—	2	2	3	1	1	—	9	2. „ exceeding 5,000 <i>l.</i>
—	1	—	1	2	1	2	7	3. Above 5,000 <i>l.</i> and not exceeding 10,000 <i>l.</i>
1	1	—	1	1	4	3	11	4. „ 10,000 <i>l.</i> „ 50,000 <i>l.</i>
—	3	1	—	1	3	—	8	5. „ 50,000 <i>l.</i> „ 100,000 <i>l.</i>
—	1	1	1	—	2	2	7	6. „ 100,000 <i>l.</i> „ 500,000 <i>l.</i>
—	2	1	1	1	1	—	6	7. „ 500,000 <i>l.</i> „ 1,000,000 <i>l.</i>
—	—	—	—	—	—	—	—	8. „ 1,000,000 <i>l.</i>
1	12	5	12	9	14	9	62	Total

REGISTERED in each Year, under the Acts of 1856-57 and 1862.

I. LIMITED.—Companies Acts, 1862 and 1867.

1862.	1863.	1864.	1865.	1866.	1867.	1868.	Total.	Amount of Nominal Capital.
1	—	—	—	—	—	—	1	1. Not known
1	4	2	5	1	3	3	19	2. „ exceeding 5,000 <i>l.</i>
—	2	2	1	—	—	2	7	3. Above 5,000 <i>l.</i> and not exceeding 10,000 <i>l.</i>
1	6	2	1	1	—	—	11	4. „ 10,000 <i>l.</i> „ 50,000 <i>l.</i>
1	—	1	—	—	—	—	2	5. „ 50,000 <i>l.</i> „ 100,000 <i>l.</i>
—	—	4	—	2	1	1	8	6. „ 100,000 <i>l.</i> „ 500,000 <i>l.</i>
1	—	—	2	2	1	1	7	7. „ 500,000 <i>l.</i> „ 1,000,000 <i>l.</i>
1	—	—	—	—	—	—	1	8. „ 1,000,000 <i>l.</i>
6	12	11	9	6	5	7	56	Total

II. UNLIMITED.—Companies Acts, 1862 and 1867.

1862.	1863.	1864.	1865.	1866.	1867.	1868.	Total.	Amount of Nominal Capital.
9	5	3	5	1	3	5	31	1. Not known
3	2	2	3	—	—	—	10	2. „ exceeding 5,000 <i>l.</i>
3	2	1	1	—	1	—	8	3. Above 5,000 <i>l.</i> and not exceeding 10,000 <i>l.</i>
9	—	2	1	—	—	—	12	4. „ 10,000 <i>l.</i> „ 50,000 <i>l.</i>
15	3	1	—	—	—	1	20	5. „ 50,000 <i>l.</i> „ 100,000 <i>l.</i>
11	3	2	—	1	—	—	17	6. „ 100,000 <i>l.</i> „ 500,000 <i>l.</i>
16	1	—	1	1	1	—	20	7. „ 500,000 <i>l.</i> „ 1,000,000 <i>l.</i>
6	—	—	—	—	—	—	6	8. „ 1,000,000 <i>l.</i>
72	16	11	11	3	5	6	124	Total

TABLE G *contd.*—Summary of the foregoing Tables.

Amount of Nominal Capital.	New Limited.		New Unlimited.	
	1856-62.	1862-68.	1856-62.	1862-68.
1. Not known.....	3	30	—	14
2. „ exceeding 5,000 <i>l.</i>	827	1,210	18	9
3. Above 5,000 <i>l.</i> and not exceeding 10,000 <i>l.</i>	384	514	8	7
4. „ 10,000 <i>l.</i> „ 50,000 <i>l.</i>	826	1,299	12	11
5. „ 50,000 <i>l.</i> „ 100,000 <i>l.</i>	245	540	1	8
6. „ 100,000 <i>l.</i> „ 500,000 <i>l.</i>	172	557	—	7
7. „ 500,000 <i>l.</i> „ 1,000,000 <i>l.</i>	38	174	—	6
8. „ 1,000,000 <i>l.</i>	20	121	—	—
Total	2,515	4,445	34	62

Amount of Nominal Capital.	Old Limited.		Old Unlimited.		Total.
	1856-62.	1862-68.	1856-62.	1862-68.	
1. Not known.....	—	1	3	31	82
2. „ exceeding 5,000 <i>l.</i>	81	19	200	10	2,369
3. Above 5,000 <i>l.</i> and not exceeding 10,000 <i>l.</i>	33	7	53	8	1,014
4. „ 10,000 <i>l.</i> „ 50,000 <i>l.</i>	60	11	76	12	2,307
5. „ 50,000 <i>l.</i> „ 100,000 <i>l.</i>	20	2	21	20	857
6. „ 100,000 <i>l.</i> „ 500,000 <i>l.</i>	28	8	30	17	819
7. „ 500,000 <i>l.</i> „ 1,000,000 <i>l.</i>	4	7	4	20	253
8. „ 1,000,000 <i>l.</i>	5	1	3	6	156
Total	231	56	390	124	7,857

TABLE H.—*Statistics of Partnerships in France.*

	Total.	Collective Names.	Commandite.	By Shares.	Limited Liability.	Average.
1844.....	2,339	1,889	336	114	—	28
'45.....	2,720	2,080	420	229	—	29
'46.....	2,724	1,989	459	276	—	29
'47.....	2,599	1,952	408	239	—	14
'48.....	1,497	1,061	289	147	—	14
1849.....	1,939	1,468	294	182	—	20
'50.....	2,419	1,772	390	257	—	10
'51.....	2,278	1,700	412	166	—	9
'52.....	2,806	2,154	452	200	—	21
'53.....	3,514	2,686	544	384	—	25
'54.....	3,292	2,453	534	305	—	36
'55.....	3,692	2,816	489	387	—	18
1856.....	4,142	3,063	616	468	—	17
'57.....	3,959	3,107	635	217	—	6
'58.....	3,697	2,996	560	141	—	13
'59.....	3,602	2,982	544	126	—	12
'60.....	3,713	3,602	598	113	—	14
'61.....	3,659	3,041	513	96	—	12
1862.....	3,645	2,996	543	116	—	12
'63.....	4,849	3,101	627	111	10	27
'64.....	3,931	3,140	626	106	59	14
'65.....	4,084	3,185	643	152	104	13
'66.....	4,113	3,179	715	131	88	6
'67.....	3,792	3,064	530	101	77	9
	78,005	60,781	12,177	4,759	836	408

On INTERNATIONAL COINAGE and the VARIATIONS of the FOREIGN EXCHANGES during RECENT YEARS. By ERNEST SEYD, Esq.

[Read before the Statistical Society, 15th February, 1870.]

STATISTICAL Science, in its multifarious investigations, is greatly assisted by that ever-ready statistical agent—Money. Hence any subject which affects the nature and office of so obedient an agent must be of interest to the statist, even if the manner in which the subject is brought forth by the essayist is not quite in accordance with the tabular and purely statistical treatment to which such an audience as is now before me is accustomed.

The subject on behalf of which I now address you, is that of Universal Coinage; with special reference to the position which Great Britain now occupies in this question, and with a view to British interests, I am anxious to show—

Firstly. The desirability of her joining in a general scheme of international valuation.

Secondly. The manner in which this can be done with the least possible disturbance.

The Royal Commission of 1867 reported to Her Majesty against the proposal, but left the question generally subject to further discussion; the proposal made by Mr. Lowe last year seems to have been withdrawn.

Now, if it be found impossible to render effective the scheme put forth by the Chancellor of the Exchequer, which was, among other things, intended to bring about international agreement by means of seignorage, are we then to conclude that it is altogether impossible or impracticable for England to join in the carrying out of universal coinage by other methods? For the sake of England I hope that this will not be the case.

It is agreed on all sides that the introduction of a universal system of coinage would be a great step in the progress of civilisation; and, in spite of many sceptical objections and occasional sneers as to the chimerical character of proposals in that direction, the great principle must be recognised as valid. The present diversified systems of money may be compared to a number of disjointed railways or means of conveyance, all working on different gauges, and under different arrangements, necessitating unloading and reloading of commodities at the respective ends, involving charges and loss of time; whereas one general system of currency may be likened to an uninterrupted network of rails of equal gauge,

extending all over the world, and the advantages which the rapid and economical exchange of commodities would enjoy under such a system of conveyance, are a fair illustration of the advantages which international trade would derive from a uniform system of valuation.

That such a system of valuation would be the indirect or direct means of facilitating mutual intelligence, mutual agreement,—socially as well as politically,—would, in fact, stimulate civilisation, we may leave out of consideration if we like, but that the interest of every trading and manufacturing nation is enhanced by this more convenient method of effecting exchanges is patent to all.

In England the opinions in reference to this matter differ widely. Some authorities warmly support universal coinage, ready and willing to make sacrifices for the cause; others support it, but consider the difficulties great; others oppose it, because the difficulties appear to them too great, or not compensated by corresponding advantages; whilst a fourth party, boldly and sweepingly condemns every step in this direction, and, armed with the sovereign, defies the world.

This last party removes the question from the sphere of those cosmopolitan considerations by which only it should be governed, and virtually evades the discussion by a more or less veiled appeal to national vanity. The question must be treated, at least in these rooms, from a more elevated point of view. Here we are concerned with general economical interests, to which even our own national ones should, if necessary, give place; but I hope in the course of my remarks, to show you that there is no foundation for the fears which take refuge in an appeal to feeling, where reason only should be called upon to decide.

The evidence given before the Royal Commission of 1867, fairly represents the above three first opinions, but I think that in regard to the third, on the head of "the corresponding advantages," it is by no means complete, and that the importance of certain vital points connected with the question has not been sufficiently brought out. Permit me to illustrate this in my own way.

I will assume, for argument's sake, that the pound sterling should become the unit of universal coinage, that the British valuation, and its divisions, should prevail all over the world. Does any one pretend to say that this would not be a great boon to the British manufacturer and the British banker, in the carrying on of their business? Would it not give a great impulse to the development of the trade of this country? We require, at this moment, some such impulse! In former times, when England's supremacy in manufactures of all kinds was absolute, the producer of goods could afford to say to the foreigner, "Here are my goods; such is

"their price, pay me for them on the spot, or go elsewhere." Hence foreigners flocked to these markets, foreign commission houses settled in this country, and undertook the equalisation of accounts. The English manufacturer was thoroughly independent, and was not called upon to extend his intelligence by any competition in a market exclusively his own.

This system of doing business is still prevalent, but it is steadily undergoing modifications, the manufacturer desires direct intercourse—nay, he is driven to cultivate it. Foreign nations have made gigantic progress in manufactures; and many productions, formerly English monopolies, are now articles of active competition abroad as well as here. The foreign buyer, instead of sending money to England, glad to obtain goods for it, now says: "I can buy these goods at a certain price elsewhere, and upon certain conditions as to credit; if you will deal with me on these terms you may, or—I shall go elsewhere!"

The English manufacturer is thus brought face to face with a foreign account, and he may be called upon to draw a bill of exchange; and here his difficulty commences. He knows little of foreign exchanges, and, with his single mindedness of purpose, he soon finds himself entangled in vexatious disputes, either with the drawee or the negotiator; and if, guided by experience, he finally guards himself against these small losses by adding something to the price of his goods, he is by so much hampered in his competition with a foreign producer. It is not too much to say that many manufacturers, after a few trials of this kind, give up foreign trade, because the "money part" is not clear to them.

The only method in which the English manufacturer can in some way meet the case is that of drawing his bill in English currency at an exchange to be endorsed by the purchaser of the bill. This is frequently done in an irregular manner, and otherwise the cost of realisation becomes a bar to effective competition. But whilst this method seemingly answers the purpose (and before the royal commission it was stated as so answering every purpose, which I deny), it is in itself the most conclusive proof of the ignorance of, and the consequent disadvantage to, the drawer of such bills. Foreign manufacturers, when drawing upon England, know well how to adjust their claims to English currency; and bills drawn in francs, for instance, upon England, endorsed "as per exchange," are rarely seen. The habit of our manufacturers to draw bills of this kind, payable abroad in British currency instead of in the foreign currency, is bad in principle; and the saying that it answers the purpose is a weak excuse, which cannot cover the disadvantages to which the system subjects the foreign trade of the country. It also supports the business of a middleman, whose

profit adds to the price at which international commodities would exchange with another.

It is useless in this case to say that our manufacturers should become more intelligent in regard to foreign money;—they are accustomed to the old system; and now, when the general progress made brings them into strong rivalry with foreigners, they suffer inconvenience. Hence it is reasonable to assume that a uniform system of valuation would relieve them from this trouble, and bring about a greater development of trade. Is it unreasonable to assume that the foreigner may otherwise advance more rapidly, to our ultimate national disadvantage? Are there not already indications that the progress of our development is relatively less rapid than that of some other nations, and may not this difficulty have a share, small or large, in the aspect of this matter? To this it may be replied, that after all the point in question here is one of comparative education, and that it must lose all cogency as our system of public instruction improves. But this is no answer to the objections. Education, when we have enough of it, may surmount any difficulties, but the question under discussion is the removal of the difficulties themselves.

The importance of this subject of foreign accounts may be further illustrated by referring to the policy adopted by our bankers in respect thereof, as compared with that of continental bankers. The Bank of England, like the Bank of France, should, as a matter of course, confine itself to local securities; but our other banking houses should take greater interest in those arising from foreign trade. But what is the fact? Our bankers, it may be said, shun such business as troublesome, and in neglecting or discouraging it, they neglect the interest and the encouragement of their customers;—but especially, they neglect their own interest and profit. French bankers act in quite a different way.

In order to show this clearly, it must be mentioned that the following descriptions of bills arise in connection with English trade:—

1. Bills drawn and accepted in England (local bills).
2. Bills drawn abroad and accepted in England (remitted bills).
3. Bills drawn in England and accepted in France (drawn foreign bills).
4. Bills drawn in England and accepted abroad (drawn foreign bills).
5. Bills drawn abroad and accepted in France (remitted foreign bills).
6. Bills drawn abroad and accepted abroad (remitted foreign bills).

Of these six description of bills, the English banker invests only in the first two :

The bill drawn and accepted in England.

The bill drawn abroad and accepted in England.

All the rest, whether coming through his hands or negotiated direct by the merchant, go abroad. Our so-called large foreign banking houses are not in the habit of holding many of these foreign bills in portfolios, they generally sell them at once on 'Change, from whence they are sent to the Continent.

In Paris, French trade produces similar bills, namely :—

1. Bills drawn and accepted in France.
2. Bills drawn abroad and accepted in France.
3. Bills drawn in France and accepted in England.
4. Bills drawn in France and accepted abroad.
5. Bills drawn abroad and accepted in England.
6. Bills drawn abroad and accepted abroad.

All these classes of bills serve the French banker as subjects for investment until due dates, and in addition to this, he receives from England :

7. Bills drawn in England and accepted in France.

8. Bills drawn abroad and accepted in France, as also a considerable portion of Class 5 and 6 of bills passing through England.

But this is not all; for it is a well-known fact that French bankers also encroach upon the preserves of English bankers; and that several foreign discount brokers in London are in the habit of sending large amounts of purely English discount to Paris.

Whilst the English banker thus confines his range to two classes of bills, the French banker has eight or ten classes at his disposal; and although local discount presents a larger aggregate of amounts, yet the foreign business amounts to many millions per annum, and is therefore an important element.

Now whatever plea we may make in England in explanation of these facts, whether we consider our banking system superior, and that of the French inferior, there is one plea which we cannot make; we cannot say that our own disposable capital is fully employed, that it consequently suits us to let the French have that which, as far as we are concerned, is a surplus of securities, for at least as long as the Bank of England holds so large a reserve in unemployed notes, over and above a comparatively moderate stock of bullion, and so long as interest remains low, the saying is correct that money is cheap, not because there is too much of it, but because there are not sufficient good securities to legitimately employ what there is.

This reflection becomes all the stronger when we bear in mind that the Bank of France now holds 50 millions in bullion, whilst the Bank of England holds $18\frac{1}{2}$ millions; and as the former has now 5 millions of notes, and the latter $4\frac{1}{4}$ millions, over and above the stock of bullion in circulation, it is clear that their stock of bullion is as actively productive as ours.

Allow me now, in order to prevent misunderstanding, to declare at once that I consider our English banking system superior to that of all others, as far as *local* banking is concerned (indeed what can be more perfect in theory than our clearing system); but in regard to international banking, the French excel greatly. This, I contend, at the present time is a question of policy, belonging to the range of national economy.

French capital derives a clear and distinct profit from the branches of English commerce which are thus passed over by our own bankers. If, without reference to the much larger currency of France (exceeding ours by more than 100 millions sterling), you set aside for local discount purposes, a portion of bullion in the Bank of France corresponding with our own, which is wholly so employed, a surplus of some 20 to 30 millions would remain. This surplus, I allege, is invested in Paris in bills on England, and in others coming to them through England.

The portfolios of French bankers thus contain claims on England, to the amount of many millions, whilst the claims held by our own bankers on France are insignificant. What a security is this for France? What a reserve in the case of a crisis? For at any time, if danger threatens, these securities can be sent over here for realisation, to be converted into gold shipments to France. And independently of the inquiry as to why and how the French originally obtained these claims, it is evident that, by the process of continually accruing interest, they must derive a continually increasing profit from them. This goes far to explain the fact that the French exchanges have been steadily against us for some years, and that the arrivals of gold in this country are mostly sent away to swell the stock of bullion in Paris. It also explains the fact that during the last twenty years, France has been free from the effects of the several severe crises which fell upon us; formerly such disasters reacted upon France. Formerly, also, we held the theory, that if we raised our rates of interest, foreign capital would flow in; but the late crisis upset this idea; the French actually continued to draw money from here. We think that want of confidence caused this. I think that the want of confidence (a consequence of every crisis) was counterbalanced after all by the attraction of higher interest, for the great bulk of English acceptances were undoubted; and that this withdrawal of bullion is the

consequence of a separate power which the French capital holds over us.

The plea that if French capital benefits by English industry, English industry must benefit in its turn, may not be always true; but industry and capital represent after all distinct interests, and thus the matter can be reduced to one of intelligent competition between capitalists.

It may be said that when English foreign bills are sent over to France, we must receive a set-off, but there is no need for our discounting such a set-off so long as our own disposable capital is not all employed; the equivalent may be obtained when such bills are due, in the meantime, they afford us a legitimate security which, as a question of policy, we ought to hold.

In representing these views to one of our eminent financiers in Lombard Street (a gentleman whose writings on the crisis and other subjects are worthy of great attention), I met with this objection: "You want us to invest money in such securities, yet we find that we have not enough for own local discount. We find that after every crisis there is less disposable capital in the country, and at certain times, with the best securities in hand, it is almost impossible to obtain money." I conceive that this is the legitimate result of our banking policy. We entirely neglect to hold bill claims (a form of disposable capital) on foreign nations, and in the event of a crisis, we are pushed back upon our own discounts and investments, which, by themselves, cannot bring bullion to us, whilst we are driven to squeeze them to the utmost for gold. At other times, when money is abundant, we are induced to encourage local discounts beyond what is strictly prudent. We foster local speculation, and that we fear this proceeding is evidenced by the fact that many of our cautious bankers look upon a large reserve of unemployed notes in the Bank of England as a necessity, or as at least, a very desirable thing. Nothing can be more false from a really economical point of view.

If the principles which I have laid before you should strike you as worthy of attention, you may further understand the case when I tell you that these reflections are probably quite new to many of our bankers—too "foreign" for their appreciation. Most of them will tell you candidly that they know nothing of such business, that they cannot deal with foreign exchanges and with foreign matters of credit, and that they therefore rather leave it alone. But this is not as intelligent as it should be; foreign acceptances are as good as ours, and the first class of securities of that kind stands as high as that of our own bankers, whilst in importance it is continually extending. The majority of these bills are now actually endorsed by our bankers, the risk, in any case, is borne by

the country. And of those interesting and profitable operations, called arbitrations of exchange, by means of which the balances of trade are equalised, the English banker has no idea whatever. The London market for foreign exchanges, in spite of its productiveness in continental bills, instead of leading the rates, has become a passive one, operated upon principally by French bankers to their profit. Paris rules the exchange, instead of London.

The continental manufacturers and merchants enjoy the hearty co-operation of their bankers in matters of exchanges, to their mutual advantage. I am of opinion that the balance of trade is strongly influenced by this proceeding; the hints which I have given may lead you to recognise, in more ways than one, the international importance of this subject.

What I desire to convey by all this is, first, the reflection that there is no reason why England should not excel in general banking, to her own profit, and for her own security, as well as in local banking; for as, after all, we are the most cosmopolitan of all nations, enterprising, vigorous, and industrious, fond of generalising, we ought to be able to do better than others; and second, that if this is desirable, the introduction of a universal system of coinage will do much to remove the greatest difficulty in the way, and would thus facilitate a change in our policy.

I trust that you will excuse these remarks. I am prompted to make them because I feel their paramount importance. To one familiar with the various banking systems and matters of exchange, the questions here involved appear as the constituent parts of a vast piece of productive machinery, as a clearly defined whole, mathematical in its operation. And whatever other questions connected with the development of trade, and the condition and changes in the prosperity of various nations may have their weight in this matter, we may still do well to ask the question: "Why does the Bank of France hold 50 millions sterling in bullion, whilst the Bank of England holds but 18½ millions?"

Permit me here to refer to a speech made two years ago by Mr. Göschén, who, on referring to international coinage, stated that variations in exchange would nevertheless occur, even if we had an identical unit, in the same manner as now between England and Australia. This is true, but the variation expressed by a percentage would be much simpler and far more easily understood than the mysterious figures in the present courses of exchange. These variations, however, would occur only in the so-called short exchanges for immediate payments, covering the banker's charge for the service and re-exchange; but, for the great majority of long bills, the respective rates of interest would rule in the same way as discount does now. Thus, if interest in London be at 2 per cent.,

and interest in Paris at 4 per cent., the London bill would discount at 2 in London, but the Paris bill at 4 in London. The English discounter or banker would prefer the French bill, as giving him more interest. And if the circumstances were reversed, and interest dearer in London than in Paris, both the French and the English banker would prefer London bills. The respective markets would thus be supplied with money, or relieved from the greater pressure for discount in a natural manner, and the balance of trade would become equalised without the present spasmodic movements of bullion from one place to another. A great deal more might be said upon this subject, and I might show how great would be the saving in coinage; how much more regular the operations of the Mints might become; how convenient the issue of bank notes founded upon a general unit.

From these remarks many may now agree with me that it is not only desirable, but that it is necessary, for Great Britain to take action in behalf of international coinage.

You may be able further to appreciate this necessity for action, if I point out to you the steps already taken, and about to be taken, by other nations. France, Belgium, Switzerland, and Italy, formed a monetary union in 1865, which it is now announced that the Papal States, Spain, and Austria are about to join. In the United States, strenuous efforts are made in the same direction, and with the future resumption of cash payments, America (like England in 1816) is now in a favourable position for making the change, whilst the French standard for quality of coins of 900 fine, exists already in America, in North and South Germany, in Austria, Greece, and the majority of the American republics. The English valuation, in its purity, exists only in Australia and a few other colonies, whilst Russia, Turkey, Portugal, and the Brazils have the same fineness, 916·6, for their gold coins as England, and it may be as well to remark, that both Portugal and the Brazils use the English sovereign instead of coining for themselves. Russian and Turkish gold coins are scarce.

The coinage threatens, therefore, a separation into two principal factions—the French system, with its decimal division, and the English system. Now what we have to consider here, independently of our bias in favour of our own coin, is this:—

Is it our interest to join the nations already united and about to be united, or shall we now induce them to join us? or, shall we remain alone, and rely entirely upon our own favourite valuation, in opposition to them? We may nail our colours to the mast, and fight it out, but we cannot expect that every battle should be won. We should rather call a council, and deliberate carefully upon every point connected with this subject, and whichever way the delicate

balance should turn, British energy, if British interests are found to be affected by it, will take the right course.

So large a combination as will stand against us, will produce a centre of banking power. Paris has made advances in this direction already. Shall London become another centre, and the banker of a much more limited circle? That is a point of interest which concerns every Englishman.

What is now the course of action which England should adopt under these circumstances? The problem may be narrowed to the assimilation of the English and the French coinage, or rather the English and French gold coinage, for the consideration of the single or double valuation can be separated from this question.

The English sovereign, in French money, has a gold value of 25·2215 frs., whilst the French napoleon is worth 15/10·314. If we reduce the sovereign by the odd 0·2215, and make it worth 25 frs. exactly, or if the French increase the gold value of their napoleon by 1·686d., so as to make it exactly 16s., we gain the principal point—that of bringing the coins into just arithmetical relation to each other; we accomplish, in fact, an international coinage.

One of the nations only need make the change, it is impractical to suggest a middle course, *i.e.*, a change on both sides; and whichever nation makes this change, it must be borne in mind, is saddled with all the difficulty and trouble of a disturbance of the existing valuation, its influence upon fixed contracts, and other settled and vested interests, whilst the other nation goes scot free of all this inconvenience.

Both nations have strong claims to be the one whose system should be adopted by the other.

The great claims which England can advance are these:—

1. The British valuation has existed since 1816, uninterruptedly successful, whilst the monetary union between France and other States dates from 1865 only.

2. The English sovereign values an enormous amount of property here as well as abroad.

3. The British pound is a coin influential and honoured all over the globe.

The French, in answer thereto, may say, “We admit the great weight of these claims, but—

“1. Our napoleon is a coin older than the British sovereign, and although our monetary union dates only from 1865, yet the States composing it (especially France and Belgium) have coined the same money for many years before.

“2. Are you certain that the pound values more property than the franc? We are, in France, a very prosperous people; our country is larger; and with Belgium, Switzerland, and Italy, we

"are certainly wealthier than you; the joint national debts are as large as yours, and our railway and other investments are not exceeded by yours. Our joint trade, inland and foreign, is not less important than yours.

"3. It is true that your sovereign is recognised everywhere, but our napoleon has as wide a range abroad as the sovereign; if not a wider one!"

Besides this, the French may say: "Under our monetary union we have made a large coinage, mostly new, and although the union is not old, yet the system is thoroughly settled, and extends to our colonies. Your English coinage is worn a good deal, and requires renewing to a great extent; your own colonies, India for example, do not go hand in hand with you."

"We, France alone, have, during the last twenty years coined 250 millions in gold, you in England, during the same period, have coined only 105 millions." (See Appendix, p. 64.)

"Our French system of money, weights, and measures, rests upon a uniform basis, one thing connected with another, and with its decimal divisions is rapidly extending itself all over the world. It is unfair, for these reasons, that you should now ask us to forego all this, and to join your system, which, as you yourself avow, by the endeavours made to reform it, ought to be amended."

Against this reasoning I am afraid that we would not stand, except by our own self-will.

And if we couple this with the undoubted fact that France and the union, together with the other States moving in the same direction, are collectively so much stronger than we are, we cannot help the conclusion, that the French have stolen a march upon us, that we must either join them if we want to participate in the advantages of the arrangements already made, or, despising these advantages, that we must remain as we are, preferring this position and its consequences, to the difficulties and troubles attendant upon a change in our monetary system.

From these premises you have no doubt already perceived that I contemplate the recommendation that England should no longer waver in this matter of an international coinage, but that in the interest of civilisation generally, and that of her own trade especially, she should boldly and energetically grapple with the difficulty.

We must reduce the fine gold contents of the sovereign by 0·878 per cent., equal to the 0·2215 frs., or 2½ pence. For convenience sake, let us call the reduction 2d.

How shall we provide compensation for this diminished gold value, since we seem to agree that seigniorage cannot serve as a substitute for gold? The creditor has the undoubted right to assert

that the reduced sovereign will have a reduced purchasing power, and for this reduction equity demands that he should receive a set-off. Here then is the difficulty in the whole matter.

I shall presently lay before you the chief points upon which the settlement, or rather the adjustment of old claims into new ones, can be better estimated; but first I desire to lay before you some views in reference to the extent of compensation, which, under the circumstances, might become necessary.

The difference between the old sovereign and the new, if measured by their respective theoretical gold contents, is $2\frac{1}{4}d.$, the present Mint law provides that 20 lbs. troy of standard gold shall make $934\frac{1}{2}$ pounds sterling, in future the same proportion of fine metal would serve to make $942\cdot78$ sovereigns.

This constitutes, as I may call it, the strictly theoretical basis of our valuation; and in theory all contracts are supposed to be carried out on this basis. But only in theory, for in practice the Mint regulations themselves provide the ground for a deviation.

The Mint works under the so-called "remedies," namely, 12 grains allowance for every 1 lb. troy weight of coin and one-sixteenth of a carat in the 22 for fineness. The one equal to $0\cdot2083$, the other $0\cdot2841$ per cent.—together $0\cdot4924$ per cent. According to this, the sovereign may be either of the fine gold value of $113\cdot556$ grains, instead of $113\cdot001$ grains, its exact theoretical value; or it may be of $112\cdot446$ grains only, and in the latter case it is worth $19/10\cdot821$ pence.

These remedies were established at a time when the art of assaying and coining was less perfect than it is at the present day, and I aver that now they are no longer required to the same extent.

I propose, for instance, that the remedy for weight should be entirely abolished. I admit that individual sovereigns, with the most careful manipulation, will still differ in weight; but the terms under which our Mint works have no reference to the single sovereign, the law speaks of the pound troy of coin, and an allowance thereon of 12 grains. The Mint does not require this, for the deviation in the pound weight of coin is less than 1 grain on the average, and a careful admixture of pieces would do away with this margin, at least as far as bullion scales can tell a difference.

We can thus abolish the remedy for weight both legally and practically. The recommendation is not new; it has been made already, for Mr. J. Watherstone, in a small publication, on the Pyx trial in 1847, made it; besides this, the Russian Mint works entirely without the remedy for weight on its gold coins.

The remedy for fineness of one-sixteenth carat, or 1 part in 352, is also excessive. French and English assayers report to 1 part in

10,000 fine, and if we reduce the remedy to 1 part in 1,000, we have ample margin for the true standarding of the metal; this will be acknowledged by all practical assayers.

Now, if the new sovereign, which under the new Mint law should weigh 112·009 grains fine, can be made of 112·121 as over, it can be of 111·897 grains fine as below standard; in which case it would be worth 19/9·655 pence. The old sovereign being legal issue at 19/10·821 pence, the difference between the two becomes reduced to 1·166 pence.

In making this suggestion I leave out of the question the fact that the present sovereign may, by wear and tear, be reduced to $122\frac{1}{2}$ grains, and still be legal tender, when, with the remedy of one-sixteenth carat for fineness, its actual value becomes 19/9·818. This fact has led many people to the conclusion that it might be taken advantage of for effecting the change, or rather for justifying its execution without compensation; but, inasmuch as the new sovereign must also have an allowance for abrasion, it cannot be so used. The present allowance is three-quarter grain, but as the new sovereign should be made of gold 900 fine, a much harder compound, we may reduce the limit of abrasion to five-eighths, or half a grain. This would have the effect of keeping our coinage in better order, and the *difference* between the allowances may, as a matter of theory, be made available for the comparative higher estimation of the new piece; at all events this difference is more than sufficient to absorb the 0·116 pence, on the 1·116 pence arrived at before; and upon this basis I may claim that the new sovereign will be of the value of exactly 1*d.* less than the present piece.

My object in thus reducing the difference between the old and the new sovereign, will be apparent to you,—I wish to arrive at a manageable arithmetical figure, upon which the conversion can be made, but I am aware that you may have a great deal to say against the manner in which I have arrived at this result, for you will no doubt answer: The law of the country requires $934\frac{1}{2}$ sovereigns for 20 lbs. troy of standard gold, and that is our valuation; the Mint remedies work in both directions, and are merely incidental; the strictest equity demands that the full allowance of $2\frac{1}{2}$ *d.* should be made!

I admit that in this sense I have strained the operation of the Mint remedies to one side only; but I contend that these remedies are nevertheless, in their legal form, part of the theory of our valuation. That the new limitations I recommend are practicable is not denied; this practicability is simply the result of progress in metallurgical science; and inasmuch as the whole subject of international coinage is one originating on the plea of progress and

civilisation, it seems to me only right that we should take any legitimate advantage of this position.

The Master of the Mint may issue pieces with the full reductions pointed out, and nobody would have the legal right to complain. As a matter of practice he does not do so, for if he did, a strong moral, if not a legal, complaint would be made against him; and Her Majesty might interfere on behalf of the people.

But although the legal maxim—"that nobody need do more than the law exacts"—is weakened in this case, we may bear in mind that this question of coin, in one of its important elements,—that of the legal circulation of sovereigns when below weight by abrasion,—already presents the feature of one-sidedness, so that its consideration is not new. The new sovereign manufactured with greater nicety, theoretically as well as practically, thus becomes a more regular standard of value, and a more valuable one; and this reflection has a certain weight, expressible in money value.

Changes of valuation have taken place in other countries without a scheme for compensation; the most noteworthy modern example being that of Germany. The Prussian thaler coined before 1857, at 14 pieces per Cologne mark fine, since the monetary convention between the German States of that year, is now coined at the rate of 30 pieces per half-kilogramme; this amounted to a reduction of 2s. 10d. per cent., equal to 1d. per pound. The people submitted to this change without a murmur, for they recognised the great benefit which this new valuation would confer on their country. Let us not fall into the vulgar error of saying that Prussia is not so important as England; in matters of money, the principle, rather than the amounts involved, must be considered, and the Germans, in matters of pecuniary personal interest, are perhaps more cavilling and less generous than the English.

They cut the Gordian knot; what I propose is, that we should untie this knot, as far as we fairly can, and that we should cut the rest; and this proceeding, I imagine, is not in contrast with the spirit of English action in matters requiring a practical solution. This may dispose of the flaw in equity to which I have referred, and in this sense, considering the nature of the numerous proposals made, a difficult problem may be solved by fair compromise.

But whether I am right or wrong, and I would leave this for you to decide rather than myself, whether we call the difference $2\frac{1}{2}$, or 2d., or 1d., I strongly urge upon you again the necessity for taking action.

In either of these cases, on the basis of 2d. or 1d. per pound, we have to consider—

1. How shall we exchange the old coinage for the new; and

2. How shall we provide for the conversion of accounts and the adjustment of fixed contracts?

The difficulties attaching to these problems have been much exaggerated.

It has been said, for instance, that before the new coinage is issued, it would be necessary first entirely to withdraw the old, and in the meantime to issue *1l.* notes. The Mint, it is said, would take a number of years before it could furnish the same amount of gold as is now in circulation.

The issue of *1l.* notes, hereafter to be redeemed in new coin at a different valuation, would only complicate the matter; it is quite unnecessary. I propose that both coinages should circulate together at first, the present becoming recognised under the title "the old valuation," the other as the "new valuation;" there being a difference of *2d.* or *1d.* between them. This is perfectly practicable; it has been done before in other States.

Supposing that after the passing of an Act of Parliament it should be announced that within one year's time the new coin would be issued, the Mint would cease the coining of old pieces, and during the year prepare, say, 15 millions of the new coins. (The engraving of the dies and other preparations might absorb six months, else the Mint might easily turn out 30 millions per annum.) During the next two years the Mint would coin between 40 to 50 millions, and in the fourth year the conversion would be complete.

At the time of the first issue of new coin, the old piece would be worth *1l.* and *2d.*, or *1l.* and *1d.*, as the case may be; the new piece *1l.*,—and one should serve as legal tender for the other upon this basis. At the end of the first two years, the old coin might serve as legal tender for payments stipulated for in the old valuation; but it should cease to be legal tender for payments in the new valuation, whilst the new coin, of course, should serve and continue to serve as tender for the old—with the addition in pence as may be agreed upon.

At the end of another two years, the question of abolishing the legal tender value of the old coin would not come too early. I am of opinion that, with proper arrangements, the new valuation could be made paramount in less than two years altogether.

The Mint should then be called upon to redeem the remaining old coins at a premium of *2d.* or *1d.* per piece; that is, of all pieces above $122\frac{1}{2}$ grains in weight. The Mint by this redemption might suffer some loss; but if a careful calculation be made as to the probable average weight of the pieces remaining, and their quantity be estimated as high as 30 millions, the loss could not exceed 90,000*l.*, and it may be much less.

This scheme would have the advantage of entirely relieving

the State from the prospective liability of converting the present "light" coinage, which it is estimated would cost from 350,000*l.* to 400,000*l.* The bank, instead of cutting the light coins, might select those of the weight corresponding with the new piece, and stamp them with a mark designating their lowered character and office as equivalent to the new coin; and the owner of such light pieces would lose nothing by the process. For if the pieces are actually cut, and must be sold as bullion, the loss considerably exceeds 2*d.* per pound.

These light but re-marked pieces (the mark might be struck on both sides with a small steel die marked N. or N. L.) would at once serve in lieu of new coin; although, if the Mint works at its full power, new pieces could be made fast enough. The pieces so marked need not necessarily remain long in circulation, nor in any considerable quantity, for when presented at the Mint, they could be exchanged for new coins at the rate of 50,000 a-day, or more. I am well aware that bankers would object to the mixture of coin, because it interferes with their present methods of handling and weighing large quantities; but in the choice of evils the plan might seem the best,—at any rate, if all the suggestions may be practically considered, that of the issue of 1*l.* notes, to replace temporarily the gold withdrawn, would seem the most inconvenient for bankers, for the handling of only 10,000 1*l.* notes is a formidable matter. The Bank of England, on the bullion value of coins held for recoinage, may, as usual, issue more 5*l.* notes to assist the movement, but I do not think that this will be required to any great extent. The disturbance, on the whole, would not be greater than that which would be caused if the Government took steps to correct the present light gold coinage without a change in the valuation—and the pressing necessity for such a proceeding becomes more apparent from day to day. For the carrying out of the suggestion made, the present moment would therefore seem exceptionally favourable.

The importance of this point of light coins will be more clearly seen, when I state that the estimates as to their proportion in the currency range from 30 to 45 per cent. And in view of the large saving effected on the contemplated outlay of 400,000*l.*, the Government might make other smaller outlays to encourage the carrying out of the new coinage.

The new sovereign being 900 fine instead of 916.6 (the present standard) would, by its colour, be distinguished from the old. The image of Her Majesty might remain as it is; the other side might bear a device different from the present.

No change whatever need be made in our Silver coinage, or that of Copper. As it is, it is a token currency, with ample margin for an allowance of 2*d.* in the pound. That the new sovereign should

count 20s., and the old one 20s. 2d. or 20s. 1d. is obvious; the effect which this would have on the holder of silver is one apart from the question of coinage. If in future we make our lower silver coins 900 fine instead of 925 (the present standard), we should do well; we might even, as the French have done, make them 835 fine.

The difficulties under which the conversion of accounts and contracts from the present to the new valuation would take place, have also been much exaggerated.

There is no necessity whatever for a tariff, the simple fact that the old sovereign is worth 1d. or 2d. more than the new one, is quite sufficient as a basis for a settlement. Much stress has been laid upon the ignorance of the lower classes in reference to this question, it seems to me that they can be taught easily, and in matters affecting his individual interest the most uneducated is quicker of apprehension than many political economists of the day are ready to believe.

Supposing that in two years, say on the 1st January, 1872, after the passing of the Act, the new valuation should come into force. Would that not be sufficient notice for the general public to prepare for the change?

The great bulk of property, say goods and commodities of all kinds, would require an addition to its value of 2d. or 1d. per pound. Every merchant, every dealer, would understand this at once, and no difficulty whatever would arise, inasmuch as the valuing of merchandise is optional with the holder. The same may be said of lands, houses, and of all and every description of investment paying profits or dividends, such as railway shares, and shares in other enterprises. In regard to insurance premiums, for instance, the change would have no effect whatever, the future premium, as well as the sum insured, would be payable in the new valuation, the value of old policies might, if required, be readily computed into the same. In all valuations, in all contracts subject to reciprocal arrangements, the conversion from the old into the new unit of value is a natural process, resting upon an arithmetical problem with which it is easy to deal; and inasmuch as the great majority of the relations in commerce, as well as in social life, come under this category, we ought not to consider that the conversion involves any insuperable difficulty.

In so-called fixed contracts the difficulty becomes at once apparent.

There are certain guiding principles which we must agree upon. In contracts involving small payments, we have the right of availing ourselves of the limit of legal tender, so that for sums under 2l. we may disallow compensation. A precedent for this principle is found in our law of receipt stamps; we exempt payments under

2*l.* from the 1*d.* stamp, and this in connection with the fact that payments under 2*l.* can, as heretofore, be made in the unaltered silver coin, gives us a fair ground of separating them into a class.

Large contracts may be separated into two descriptions:—

Contracts on capital bearing interest.

Contracts on salaries or annuities.

Among the contracts on capital the State debt claims our attention first. This can be converted into the new currency by its immediate redemption to the extent of 1*d.* or 2*d.* per pound of the capital. On 800 millions, 2*d.* in the pound would be 6,666,666*l.*, 1*d.* 3,333,333*l.*, which paid by the State as addition to one year's dividend as four-fifths or two-fifths per cent., would liquidate the matter. This payment would be no loss to the State whatever, inasmuch as the State would pay less interest in gold hereafter, and the means for making the payment may be procured in a legitimate manner by the issue of consols.

With other foreign State debts, on which interest in sterling is payable in this country, the Government might initiate conventions with the respective States to the same effect.

Railway debentures and other stocks of this description of contract could be converted on similar principles.

In reference to mortgages, liberty might be given to the debtor to convert the same into the new currency by a proportionate immediate redemption of capital, making due allowance for interest in prepayment, and a form of redemption receipt might be prescribed, which the debtor would hold. In short mortgages under seven years, the old coin might serve for the first years, but even if the new valuation were used in future payments, without previous redemption, there would be no great difficulty in adding the 2*d.* or 1*d.* per pound to the payment of both interest and capital.

Rents might be treated by the simple addition required per pound, and in a similar manner all fixed incomes, salaries, and annuities might be equalised.

This class of contracts, not being dependent on the repayment of a capital, is now frequently paid in fractional amounts, to which an addition would not cause great inconvenience; but here also a system of redemption, by one payment, might be left optional to the payer, and I do not suppose that our insurance companies, nor the Government, would meet with difficulties in settling these matters, making due allowance of interest for prepayments, and taking advantage of equitable compromises.

Salaries dependent on the will of the payer, would not belong to this category.

I refrain from going further into details; but I am satisfied that

if I have omitted any special kind of contract, it can be made to fall under the one or the other of these descriptions. The employment of a tariff for many of these transactions would be useful, and I have no doubt that our actuaries could render them perfect.

It is of course understood that for all new business the notice given would be amply sufficient. For bills of exchange, as well as for other transactions, I may suggest that the old sign of £ sterling should be changed into N L sterling, as a designation for the new valuation. In a few years' time this may cease. The conversion of all account books, bankers' balances, &c., might be made on the 1st January agreed upon by the addition on all balances debtor or creditor of the *2d.* or *1d.* in the pound, as we may deem proper.

I fully admit that the conversion of the old into the new currency will be a strain on the convenience and the intelligence of the nation. What we have to weigh, in fact, is this: Shall we undertake this trouble, in consideration of the benefits which we may derive from a universal system of coinage, or shall we not?

The Government, by prompt action in regard to the State debt, and its own accounts; the intelligent classes in this country can greatly assist this movement, and the lesson conveyed to more ignorant persons by the change of accountability generally, is perhaps less severe, and less troublesome, than is commonly supposed, whilst it is positively beneficial from an educational point of view. And this would open the path for the better understanding of changes in weights and measures, which at some time or other we may find it expedient to make.

In proposing then that we should reduce the sovereign to the value of 25 frs., I am far from recommending that we should *in toto*, or partially, adopt the French franc. Not only is there no necessity for our doing so, but I maintain that the rest of the sterling system is superior to that of the French; that the pound, as a unit, is more suitable than the franc. The unit afforded by the pound is larger, and preferable for the present requirements of trade, to the franc and its string of figures.

In the second place, the shilling accords better with the coinages of other nations than the franc. It is now one-third of the Prussian thaler, one-half of the Austrian florin, and although the dollar is divisible into 4s. as well as 5 frs., we find that in the actual coinages the shilling is far more numerously represented than the franc.

The franc is too small a piece for a convenient gold coin; the complaint that the 5 frs. gold pieces are too small is very frequently uttered, whilst the 5s. gold piece, being one-fourth heavier, might be considered as being of the proper size.

Our present shilling of 12 pence has 48 farthings. Taking the

farthing as the lowest coin practically current, I recommend that the shilling be reckoned in future as 50 farthings, and our coinage might thus run:—

Copper—

1 farthing	= 1 farthing	} Bronze, as at present.
2 "	= 1 halfpenny	
4 "	= 1 penny	

Silver—

12½ farthings	= ½ shilling	} Silver, as at present.
25 "	= 1 "	
50 "	= 1 florin	
100 "	= 1 double florin, 900 fine, 25 grammes.	

Gold—

250 farthings	= ½ sovereign	} Gold 900 fine, 124 sovereigns per kilogramme.
500 "	= 1 "	
1,000 "	= 1 "	
2,000 "	= 1 double sovereign	
4,000 "	= 1 quadruple "	
5,000 farthings	= 5 <i>l.</i> note	
10,000 "	= 10 <i>l.</i> "	
&c.,	&c.	

In the divisions as I have given them, it will be seen that the figure 4 for copper is followed by a division of 5 in silver, whilst the largest coin in silver again represents 4, the next in gold being 5. This system gives greater variety—for each issue varies—than the French, who, in silver and gold and gold and notes, issue four descriptions, representing two equal values, namely, the 5 frs. gold and silver pieces, and the 100 frs. gold piece, and 100 frs. bank note.

The 10-farthing pieces, or one-fifth of a shilling, might gradually replace the 3*d.* piece, quarter shilling, now current.

The use of the one quarter, double, and quadruple sovereign, is subject to certain objections, they are not suitable to the bankers' scale on account of unequal abrasion.

A novelty introduced is the double florin, the dollar,—which, being of lesser weight than the old 5*s.* crown piece, may be used advantageously. And I propose that this 4*s.* piece should be made of full silver value, of the same weight and fineness as the 5 frs. silver piece. This would do away with the objection attaching to the old crown piece, that of being under value. We should utilise silver as far as we possibly can. In reference to this matter I have lately published a small book, entitled "The Depreciation of Labour and Property which would follow the Demonetisation

“ of Silver,” copies of which have been distributed to several members of this Society.

In that publication I recommend the dollar as a means for upholding the price of bar silver, and as a link between our present gold valuation, the double valuations elsewhere, and the silver valuation of India and the East. I am perfectly well aware that in this country there is the strongest possible objection to anything that bears the name of the double valuation, it is nevertheless possible that what has been written on the subject may be worthy of further consideration, especially as the French Government has lately reopened the inquiry.

It must be distinctly understood that this question of the valuation is apart from that of the equalisation of the gold coins. The Chancellor of the Exchequer thinks otherwise, he makes much of this opinion, perhaps merely for the purpose of postponing the subject generally.

But whether the double florin be introduced as this link, when it should receive a certain rate of legal tender value, or whether it be used under the present limit of tender for silver coin, the country cannot possibly be damaged by the issue of such a coin, and the trial, even with all the objections against experimentalising, may prove successful.

My proposal to retain the pound and to decimalise it as suggested, even if the quarter sovereign, the double and quadruple piece, and the silver dollar, be not issued, will thus maintain the essential features of the sterling valuation.

The French Government has already proposed to legalise the issue of 25 frs. pieces, as an approach toward us, but this proposal has lately met with much opposition, because it is thought that the adoption of this piece as a unit will have the tendency of enhancing prices. The question may, therefore, resolve itself into a struggle as to the supremacy of the one or the other coin, and we would do well to take the lead now rather than be led by the French.

And I have not the least doubt that if Great Britain now acts with decision in this matter, that the majority of the other nations who have not as yet joined the French union, will be ready to adopt the new British system, and this, in itself, must be satisfactory to English feeling and to English interests.

Thus our sterling money and system, modified certainly as to the pound sterling itself, but maintained in its divisional parts of silver, with the improvement of decimalisation, would again reign supreme.

The time allotted to me prevents my giving you certain views in reference to a better arrangement for executing our coinage, effecting a considerable saving in the working of the Mint.

The adoption of a uniform system of weighing, assaying, and valuing bullion, to be agreed upon between the various nations, forms part of my scheme. The abolition of "free coinage," and the imposition of a mintage become necessary, and these matters can be arranged without disturbing the ground upon which the Bank of England notes are issued.

Finally, in leaving you to judge of the remarks which you have permitted me to make, I would request you to take the broadest possible view of the subject.

And if we bear in mind that the ever increasing trade of England, conducted on certain millions of gold as a basis, is now three times as extended as twenty-five years ago, whilst the gold basis has not kept pace with this increase, our own interest demands that we should remove every obstacle, and clear the way for the race after wealth, in which this country has hitherto taken the lead.

If I have not succeeded in making you see as clearly as I see it myself the high importance of the subject; if my reasoning and statements fall short, pray excuse any zeal which, as one who venerates this country, I may have displayed.

APPENDIX.

Totals of Coinages of Pounds Sterling and of Francs, from 1790 to 1868 inclusive, in Pounds Sterling.

	Gold. £	Silver. £	Total. £
<i>England—</i>			
From 1790 to 1813, the coinage of guineas was } 22,642,561 <i>l.</i>	—	—	—
From 1816 to 1868, pounds....	194,018,496	19,866,513	—
<i>Australia—</i>			
From 1855 to 1869	24,729,000	—	—
	218,747,496	19,866,513	
Pounds sterling, total	—	—	238,614,009
<i>France—</i>	£	£	£
From 1790 to 1868	296,487,192	193,135,235	489,622,427
<i>Belgium—</i>			
From 1848 to 1868 (Silver } from 1832)	4,954,418	12,197,325	—
<i>Italy—</i>			
From 1862 to 1868	8,084,461	6,678,447	—
<i>Switzerland—</i>			
From 1851 to 1868	—	811,922	—
The coinages of the three latter before may be esti- mated at 55,000,000 <i>l.</i>	—	—	—
	309,526,071	212,822,929	
France, total	—	—	522,349,800

From 1848 to 1868 inclusive.

	£	£	£
England	104,005,638	6,290,966	110,296,604
France	249,456,352	34,606,922	284,063,274

Exchange Transactions between England and France.

The following calculations illustrate the operations in gold bullion or gold coins between England and France or Belgium. In each country there are, so to speak, four descriptions of gold bullion from which the demand for export takes its supply. The bullion present in England consists—

Firstly. Of the current arrivals from Australia, America, and elsewhere. When there is no demand for export, these arrivals are sold to the Bank of England at 77*s.* 9*d.* per oz. standard; as soon as the demand begins, they are absorbed at the same price, or at the slight advance of $\frac{1}{2}$ *d.* per oz., by the foreign banker. If the supply of this “market bullion” fails, and if the exchange declines further, the exporter supplies himself.

Secondly. From the stores in the Bank of England, at the price of 77*s.* 10 $\frac{1}{2}$ *d.* per oz. You are aware that the bank always holds

bullion, and is always ready to sell at the advance of $1\frac{1}{2}d.$ per oz., but if no "bank bullion" could be obtained, the exporter would be compelled to take

Thirdly. New coins, if comeatable; and lastly,

Fourthly. Current coins.

In France the same thing takes place. There is, firstly, the "market bullion," which the importer sells in the market, or to the Mint, or to the Bank of France, the latter institution buying fine gold for cash at the tariff rate of 3,437 frs. per kilogramme 1,000 fine; but when the exporter is driven to take gold from the Bank of France, he is obliged to pay a premium, varying from 1 to 2 per mille. In the event of the Bank of France failing to supply, or asking too much premium, the exporter must endeavour to procure new coins; and finally, he must send away coin which he finds in circulation.

I propose to show the precise results of these operations in rates of exchange, and in so doing, I am guided not only by the theory, but also by the practice, inasmuch as the items of my calculations are taken in accordance with certain peculiarities belonging to the two systems of valuing bullion.

Shipments from London to Paris or Brussels.

INVOICE IN LONDON.

1. *Market Bullion*—

Gold bar, 200 oz. B. 1 3 $\frac{1}{4}$	£ s. d.
= oz. standard, 217·045 @ 77s. 9d.*	843 15 3
Charges $\frac{1}{4}$ per cent.†	2 2 3
	<hr/>
	845 17 6

ACCOUNT SALES IN PARIS.

Kilos. 6·221 — fine 995·5 $\frac{1}{2}$	frs.
At 3,421·53 frs.§	21,285·34
Assay	1·50
	<hr/>
	21,283·84

Exchange resulting, 25·1619 frs. per $1l.$

* The large refiners, to whose hands the bulk of the business in market bullion is confined, export at a nominal advance on the price of 77s. 9d. Others wishing to buy bullion are obliged to pay 77s. 9 $\frac{1}{2}d.$ or more, according to demand.

† The charges are here taken at quarter per cent., as covering packing, freight, and insurance. Certain large shippers make special arrangements for cheaper terms. In order to simplify the matter, the charges are here added to the invoice.

‡ The English assay of B. 1 3 $\frac{1}{4}$, is equal to 994·8 millièmes, but even 996 is called B. 1 3 $\frac{1}{4}$ in the English practice. The French assay of the same piece at 995·5, or 0·7 millièmes more than 994·8, represents about the average of the better turnout under the French system.

§ The old Mint tariff is now out of use. The Bank of France buys gold of 994 fine, and finer at the new rates from well known refiners or bankers, without requiring remelting.

INVOICE IN LONDON.

2. *Bank Bullion*—

Gold bar, 200 oz. B. 1 3½	£	s.	d.
= oz. standard, 217·045 @ 77s. 10½d.	845	2	4½
Charges ¼ per cent.	2	2	3
	847	4	7½

ACCOUNT SALES IN PARIS.

	frs.
The same as before	21,283·84
Exchange resulting, 25·1214 frs. per <i>l.</i>	

INVOICE IN LONDON.

3. <i>New Sovereigns</i> —	£	s.
1,000 <i>l.</i> of full weight	1,000	—
Charges ¼ per cent.	2	5
	1,002	5

ACCOUNT SALES IN PARIS.

	frs.
Kilos. 7·988, at tariff rate for 916 fine, 3148·29 frs.	25,148·54
Exchange resulting, 25·0921 frs.	

INVOICE IN LONDON.

4. <i>Current Sovereigns</i> —	£	s.
1,000 <i>l.</i> , light on the average by ⅙ths grain from full } weight	1,002	5
		frs.
Kilos. 7,970 at 3,128·29 frs.	25,091·87	
Exchange resulting, 25·0355 frs.		

Thus for every *l.* laid out in London—

	frs.
Market bullion gives in Paris or Brussels	25·1619
Bank " "	25·1214
New sovereigns " "	25·0921
Current " "	25·0355

These figures will be useful in order to demonstrate again the fallacy of the statements which were made by Mr. Lowe in regard to the melting down of the sovereign abroad. The Mints, or Banks in France and Belgium, buy the pound sterling by weight as 916 fine, and as long as they do so, nobody thinks of melting down such coin, because of the loss by the melting process, the expenses of melting and assaying; there is, consequently, no better mode of realisation than that of selling the coin to the Bank or the Mint.

Now if all the sovereigns obtained here for shipment to Paris or Brussels were heavy by a quarter grain, equivalent to one-fifth per cent., or 5 centimes on the Exchange, they would realise 25·1421 frs. per *l.*, or less than market bullion. The statement that a large quantity of sovereigns, heavy by a quarter grain, can be obtained, is quite false. It is impossible to procure them from

the bank, and I have shown before that, even supposing they could be obtained, the expense of weighing and assorting them, with the interest lost, would outstrip the anticipated profit. Besides this, the Mint never issues pieces of a quarter grain heavy. The Master of the Mint has the right to set his Cotton's weighing machines between 123·017 and 123·531 grain, which would give on either side a divergence of 0·254 grain, but it is the practice to set them much closer, so that pieces above 0·150 grains heavy or light, are thrown out and recoined. This fact, so creditable to the machinery of the Mint, ought to have been mentioned to Mr. Lowe before this, when, in all probability he would have abstained from troubling the country with his statement.

The vast bulk of the exchange transactions in gold take place in market bullion; the current passes the Bank of England, only a certain percentage enters its vaults, whilst the withdrawals are more or less spasmodic. Besides the market bullion which I have mentioned, and which consists of pure, or refined gold, there is another description called refinable gold, i.e., gold containing silver. Refining in France being so much cheaper than here, this class of bullion is sought for, and as, in spite of the premium made here, it still gives an advantage of from 2 to 3 centimes per *l.* on the exchange, it is exported even before the market bullion. All the Californian, and most of the Australian gold, is thus refinable. So long as we have refinable bullion we need not export market bullion, so long as we have the latter there are no withdrawals from the bank, and so long as the Bank of England has a store of bullion, we need not fear the exportation of our sovereigns. Sovereigns are taken away from here by travellers, occasionally also by an extraordinary demand for coined money in Portugal, the Brazils, &c., and, strange to add, ignorant parties will now and then use them for shipment abroad; but the vast international trade in bullion is carried on by gold in the shape of uncoined bars.

When the exchange with France turns in our favour, necessitating the sending of gold from Paris to London, the following results appear:—

Shipments from Paris to London.

INVOICE IN PARIS.

1. Market Bullion—	frs.
Kiloes. 6,221 fine, 995·5 @ 3,421·53	21,285·34
Charges $\frac{1}{4}$ per cent.	53·21
	<hr/> 21,338·55

ACCOUNT SALES IN LONDON.

200 oz. B. 1 8½	£	s.	d.
= „ standard, 217·045 @ 77s. 9d.	843	15	3
Loss in melting.....	8s.	—	d.
Melting	4s.	2d.	
Assay	4s.	6d.	
			<hr/> — 16 8
			<hr/> 842 18 7
Exchange resulting, 25·3144 frs.			

F 2

INVOICE IN PARIS.

		frs.
2. Bank Bullion—		
Kilos. 6,221, 955'5 @ 3,421'53 frs. (bought from }		21,285'35
Bank of France)		
Premium $1\frac{1}{2}$ per mille		31'94
Charges $\frac{1}{2}$ „		53'21
		<hr/> 21,370'50

ACCOUNT SALES IN LONDON.

	£	s.	d.
Same as before	842	18	7
Exchange resulting, 25'3523 frs. per <i>l.</i>	<hr/>		

INVOICE IN PARIS.

		frs.
3. <i>New Napoleons</i> —		
1,550 napoleons, full weight		31,000
Charges $\frac{1}{2}$ per cent.		77'77
		<hr/> 31,077'77

ACCOUNT SALES IN LONDON.

	£	s.	d.
321'500 oz. @ 76s. 2d. per oz. (sold to Bank of } England)	1,224	7	9
Exchange resulting, 25'3820 frs. per <i>l.</i>	<hr/>		

INVOICE IN PARIS.

		frs.
4. <i>Current Napoleons</i> —		
1,550 napoleons		31,000
Charges $\frac{1}{2}$ per cent.		77'77
		<hr/> 31,077'77

ACCOUNT SALES IN LONDON.

	£	s.	d.
320'700 oz. @ 76s. 2d.	1,221	6	8
Exchange resulting, 25'4450 frs. per <i>l.</i>	<hr/>		

The Mint par of exchange between England and France, which is the only true par, is 25'2215 frs. per *l.*; and you will now observe, that if the exchange deviates from this strictly neutral point in favour of France—

By 5'96 centimes, London ships market bullion to Paris.	
„ 10'01 „ „ bank „ „	
„ 12'94 „ London would send new sovereigns to Paris.	
„ 18'60 „ „ current „ „	

If the exchange turns in favour of England—

By 9'29 centimes, Paris ships market bullion to London.	
„ 13'08 „ „ bank „ „	
„ 16'05 „ Paris would send new napoleons to London.	
„ 22'35 „ „ current coin „ „	

Thus, in order to obtain bullion from France, we require rather more than 3 centimes in the turn of the exchange in our favour

than the French. This item, small as it may seem to you, has an effect against us in every business transaction between the two countries, not only in a direct way as operating on the exports and imports, but also in regard to all intermediate exchange transactions arising between France and England on the one hand and other countries.

The reason for this anomaly is obvious. We conduct the valuation of bullion in a coarse and old-fashioned manner, and in spite of our pretence to coin gold free of charge, we tax the importer and encourage the exporter, whilst France, professing to charge a mintage, obtains bullion on cheaper terms. The question is one not confined to the consideration of the French exchange, our method of realising gold places us at a disadvantage with other nations as well.

The best occasion for removing the anomaly and substituting for it a system in accordance with the spirit of the age, would be afforded by the adoption of the sovereign of 25 frs., under the improvements which I have ventured to suggest.

The figures I have given may be useful in watching the French short rate of exchange, upon which the retention in, or the withdrawal of, bullion from England principally depends. Whenever this rate stands at from 25·20 to 25·30, the gold bullion arriving from California and Australia is bought by the Bank at 77s. 9d., at least all that has been refined here, but as between England and France, this range of the exchange is the neutral one; at 25·32 frs., shipments of market bullion from France become practicable; at 25·35 and higher, we receive bank bullion. When the exchange shows signs to drop below 25·20, refinable bullion is sent to France; at 25·17½ to 25·15, market bullion leaves us; until at 25·12½ to 25·10, the Bank of England stores are attacked. At 25·07½ to 25·05, the withdrawals from the Bank of England becomes considerable.

The variations in the short exchange with France for the last twelve years stand as follows:—

	Highest.	Lowest.
1858.....	25·22½	25·05
'59.....	25·15	25·05
'60.....	25·25	25·07½
'61.....	25·40	25·15
'62.....	25·30	25·15
'63.....	25·32½	25·15
'64.....	25·37½	25·10
'65.....	25·27½	25·10
'66.....	25·27½	25·05
'67.....	25·20	25·10
'68.....	25·25	25·07½
'69.....	25·30	25·10

Thus, with the exception of the years 1861 and 1864, when for a few days the exchange rose to 25·40 and 25·37½, or to a point which brought a small supply of gold from Paris (whilst the lowest quotations in the same years were 25·15 and 25·10) the current has been towards France.

As a rule, the variations in favour of France have been more frequent and more steady. This is partly due to the fact that England acts as the principal carrier of bullion. Nevertheless, if we bear in mind the enormous production of gold in California and Australia, exceeding 600,000,000*l.* sterling, and that the Bank of England, before these sources were opened, held as much gold as it does now, and sometimes more, it would appear that other nations have obtained greater portions of this new gold than ourselves.

The New Coinage Act of Mr. Lowe.

The following letters in the columns of the "Times" refer to the New Coinage Act:—

"SIR,—The attention of all persons interested in the subject of the valuation ought to be drawn to the following remarkable paragraph in the new Act, p. 3, line 14:—

"Where, after the date in that behalf fixed by a proclamation under this Act, any person or body brings to the Mint any silver bullion, such bullion shall be assayed and coined, and delivered out to such persons at the rate of 6*zs.* for every 5,760 grains imperial weight, &c.

"The silver money of this country is coined at the rate of 66*s.* for 5,760 grains standard metal, and the other provisions of the new Act confirm this. Note, then, the importance of a comma in the above paragraph in separating the coining from the delivery.

"The public has hitherto been unable to bring silver bullion to the Mint for coinage; in future, however, 6*zd.* per ounce will be paid. Thus a fixed Mint price for silver has been established, making the proportion between gold and silver bullion as 1 to 15*2*¹/₂. We would consequently have a double valuation but for the fact that payment for silver bullion is made in silver coin under value. The present market price for silver is 60½*d.*; the importer into the Mint can obtain 6*zd.* for it, if he is willing to receive silver coin in payment. Now, unless it be the intention of the authorities merely to establish a hollow theory, and to prevent its practice by extraordinary delays and other restrictive regulations at the Mint, not provided for expressly in the Act, it is evident that this inducement of profit to the importer will bring about a large addition to our silver currency. Is this addition desirable as long as the limit of tender in silver coins prevents our making a free use of them? and can we extend the limit of tender as long as these coins are charged with so heavy a seigniorage? I think not.

"The good which an increase in the mediums of exchange chiefly used by the less wealthy classes would bring about is entirely neutralised by the unhealthiness, the undervalue of this description of money, and by the evil of being burdened by a token coinage, which is not subject to instant redemption or exportation, and which eventually, with all its inferiority, remains the property of the poor.

"Far different would the case be if it had been desired, without disturbing the present issues of silver coins up to and including the florin, to mint for the importer (at his will) a 4s. silver piece, of full value, equal to the 5-franc piece. The Mint, charging only a small mintage on such double florins, would not make the same large profit as on other coins, but any burdensome surplus of such pieces could, at all events, be exported abroad and to India.

"And if these 4s. pieces were used in this country under the same limited tender as the other silver coins—viz., 2l.—we should at all events maintain the essential features of the gold valuation. The proposal made in the new Act violates the purity of the gold valuation, for under its operation the issue of token currency under value must be initiated and controlled by the State alone.

"Mr. Lowe's new Act makes some changes in the Mint remedies. The remedy for fineness in the gold coins, hitherto at 2·84 per mille, is reduced to 2 mille; that for silver coins from 4·5 per mille to 4 per mille. These trifling concessions to improvement are little in accordance with the boasts made on behalf of what our Mint can do and actually does.

"The remedy for weight in sovereigns is reduced from 0·257 grains to 0·2 grain; that for silver appears to have undergone no modification. The present Mint law allows 12 grains on 5,760 grains of gold coin, the new law 0·2 grain on 123,274 grains, the individual weight of the sovereign. In thus fixing upon the individual coins, the Chancellor of the Exchequer acts in accordance with the practice of weighing at the Mint, but he deprives himself of the legal advantage which the old formula offers in favour of the total abolition of the remedy for weight. We can abolish the remedy for weight entirely, and should reduce that for fineness to 1 per mille.

"I remain, Sir, your most obedient servant,

"ERNEST SEYD.

"1A, Princes-street, Bank, E.C., London, Feb. 23."

"SIR,—In order to avoid misunderstanding, permit me to point out that the clause in the new Act seems to be but an awkward condensation of a corresponding one in the Act of George III, cap. 68, entitled 'An Act to provide for a New Silver Coinage and to Regulate the Currency of the Gold and Silver Coin of this Realm (22nd of June, 1816.)' Clause 9 of this Act says:—

"And be it further enacted that from and after such day as shall be named and appointed in and by any proclamation which shall be made and issued for that purpose, by or on behalf of His Majesty, by and with the advice of His Majesty's Privy Council, it shall and may be lawful for any person or persons, native or foreigner, to bring in any foreign coin, or any other coin or reputed coin, plate, or bullion of silver, in mass, molten or alloyed, or any sort of manufacture of silver, and to deliver the same at His Majesty's Mint in London, to be there melted down and coined into current silver coins of this kingdom; and such silver coin, plate,

bullion, or manufacture so brought and delivered shall be assayed at the said Mint, and melted down and coined with all convenient speed, into silver coins of a standard in fineness of 11 ounces 2 pennyweights of fine silver and 18 pennyweights of alloy in the pound troy, and in weight after the rate of 66 shillings to every pound troy, whether the same be coined in crowns, halfcrowns, shillings, or sixpences, or pieces of a lower denomination; and that as soon as conveniently may be after such silver coins, plate, bullion, or manufacture respectively, so brought to the Mint, shall be melted and assayed, there shall be delivered to the person bringing in and delivering the same a sum of silver coins of crowns, halfcrowns, shillings, or sixpences, after the rate of 62 shillings, of the standard fineness and weight hereinbefore mentioned, for every pound troy of standard silver of the fineness aforesaid, by such person brought and delivered into the Mint, and so proportionably for a greater or lesser weight; and that for the defalcation or diminution and for the charge for the assay, coinage, and waste in coining of all such silver so to be brought to the Mint as aforesaid, there shall be, and may be, retained at the said Mint the sum of four shillings of the standard and weight aforesaid, for every pound troy of such standard silver so brought in and delivered, and so proportionably for any greater or lesser weight, making in the whole after the rate of 66 shillings for every pound troy of such standard silver; anything in any Act or Acts in force in Great Britain and Ireland, immediately before the passing of this Act, to the contrary in anywise notwithstanding.

“According to this any person or persons, native or foreigner, is entitled to import silver into the Mint for coinage; but in the ‘General Regulations of the Mint,’ contained in the Report of the Commissioners on the Royal Mint in 1849, I find the following passage, p. 117, paragraph 12:—

“‘Silver bullion is *not to be imported* for coinage except for *public* account, but when received into the Mint for this purpose, under due authority, it is to be subject to the same general regulations as gold bullion imported for *private* account, the Master being deemed to represent the *Government as importer*.’

“(The italics are my own.) Here we have ‘general regulations’ directly nullifying and going contrary to an Act of Parliament. The fact is, although the Act has existed since 1816, no proclamation has ever been issued carrying the clause into effect; hence the curious and absurd conflict. I think the subject is worthy of the attention of Parliament, and you may agree with me that our Mint laws, if such they can be called, require investigation. The public has the right to know whether Acts of Parliament, or proclamations, or general regulations are uppermost in this question.

“I remain, Sir, your most obedient servant,

“ERNEST SEYD.

“1A, Princes-street, Bank, E.C., Feb. 24.”

Since the above letters were written, the new act has been amended, the clause in question has been left out entirely,—and the definition of our silver coinage now seems to depend entirely on the

schedule annexed to the act, which is referred to in clause 3: "After the passing of this act all coins made at the Mint of the denominations mentioned in the first schedule to this act, shall be of the weight and fineness specified in that schedule."

The new act certainly repeals and consolidates a number of old acts, but it fails entirely in consolidating more important matters: the conflict between Her Majesty's prerogative, the Mint regulations, and the act of parliament. The clause 11, part 9, giving Her Majesty power "to regulate any matters relative to the coinage and the Mint which are not provided for by this act," considering the omissions, notably those referring to the making of silver coins for the public, leaves us in doubt as to what is going to be done. Clause 13, conferring powers on the Treasury to "make regulations," &c. (subject to the act and proclamations), again gives scope for uncertainty.

The whole history of our Mint practice since 1816 exhibits the effects of these undefined authorities, the new act only complicates these matters.

It appears to me that Her Majesty's prerogative can be maintained in all its dignity, whilst at the same time the Mint laws and regulations, for the guidance of the Mint as well as the public, can be embodied in one simple code. Laws relating to coinage and all that belongs to it ought to be as clear as the light of the sun, and accessible to every citizen without much trouble.

It is to be hoped that the Chancellor of the Exchequer will, at some period not far off, bring in a complete measure, covering all the ground.

An interesting report on the "Mint" (ordered, &c., 11th February, 1870), signed by Mr. Rivers Wilson and Mr. Fremantle, has just been issued. It contains suggestions akin to those made by me in the pamphlet on "Seignorage," published two years ago, with which the members of the Society are acquainted.

FINANCE of the FREE CHURCH of SCOTLAND. *By the REV. DR. ROBERT BUCHANAN, of Glasgow.*

[Read before the Statistical Society, 15th March, 1870.]

IN handling the important subject of this paper, I shall endeavour to keep constantly in view the rule which the Society I have the honour to address has laid down for its guidance, "to exclude carefully all opinions from its transactions and publications," and "to confine itself rigorously to facts."

It will not, however, I presume, be regarded as involving any violation of that standing rule if, by way of introduction, and in order to bring out the true significance and value of the facts to be presented, I venture to offer some explanation of the circumstances in which the financial system of the Free Church took its rise, and of the objects it was intended to secure. The principle of self-support on which that church entirely depends, and whose working and results I am about to describe, was adopted not of choice or preference, but simply of necessity—a moral necessity, it is true—but not the less a necessity, although created not by external force, or legal compulsion, but solely by a conscientious sense of duty. The necessity to which this reference is made arose in 1843, and grew out of a controversy which fills a large place in the history of Scotland—a controversy which more than once in the course of the last three centuries assumed such dimensions and acquired such intensity as to convulse the whole framework of society in that part of the United Kingdom. The controversy to which I allude had respect to the autonomy of the Scottish Presbyterian Church—to her right of self-government, as regards all matters belonging to the spiritual province—and especially as regards admission to, and exclusion from, office and membership in the case of all persons belonging to her communion. This right, which Knox, and the other leaders of the Scottish Reformation, claimed for the church from the date of her separation from the Papacy in 1560, and from that of her national establishment and endowment in 1567, was set forth in her two books of policy and discipline—less formally, though plainly by implication, in the first book prepared by Knox and certain other eminent reformers in 1560—but fully and most explicitly in the second book, drawn up by the learned Andrew Melville, and agreed upon by the general assembly of the church in 1578. To this claim of independent jurisdiction in matters

spiritual, strong opposition was made on the part of the civil power, and serious collisions arose. It was not, in consequence, till 1592 that a satisfactory adjustment of the relations on this point between Church and State was reached. Speaking of the famous statute of that year, and of what it acknowledged as rightfully belonging to the church, the distinguished historian, McCrie, says: "What she now obtained was a legal recognition of those powers which she had long claimed as belonging to her by scriptural institution and the gift of her Divine Head. She had now a right in *foro poli et soli*, by human as well as by divine law, to hold her assemblies for worship and discipline, and to transact all the business competent to her as an ecclesiastical society, without being liable to any challenge for this, and without being exposed to any external interruption or hindrance whatever, either from individuals or from the executive government."*

Although the rights and liberties of the church, thus solemnly recognised and ratified by the State, were not long afterwards encroached upon in various ways by the action of the Crown, during the reigns of both James VI and Charles I; it was not till after the restoration of Charles II that they were formally disallowed and entirely overthrown. By the first act of the second session of his Scottish parliament in 1661, he succeeded in expressly annulling "all acts of parliament by which the sole and only power and jurisdiction within this church doth stand in the church," and also all acts by which it would seem that the office-bearers of the church had any "church-power, jurisdiction, or government other than that which acknowledgeth a dependence upon and subordination to the sovereign power of the king as supreme." The same act, by restoring prelacy, subverted the Presbyterian form of church government in Scotland; while a subsequent act, the first of his second parliament in 1669, asserted directly and positively "His Majesty's supreme authority and supremacy over all persons, and in all causes ecclesiastical within his kingdom." By the enforcement of these acts, and of others founded on them, such as the Test Act and the Oath of Abjuration, by which approval of the doctrine of the royal supremacy in causes ecclesiastical was imperatively required, the Crown and the Government of those days placed themselves in direct collision with the religious convictions of the great majority of the Scottish people. As the result of this state of things, hundreds of the Presbyterian ministers were driven from their pulpits and parishes, and were forbidden, under the penalties of confiscation, imprisonment, torture, and death, from preaching to their attached flocks, or administering to them the sacraments of the Christian church; while their flocks, on the

* "Life of Andrew Melville," vol. i, p. 322.

other hand, were visited with the same penalties for daring to accept such services at their hands. It has been computed, on good and reliable evidence, that the number of persons in Scotland who suffered death under these intolerable persecutions, during the twenty-eight years which elapsed between the restoration and the revolution, was not fewer than 18,000. It is in reference to the victims of these frightful cruelties, and to the spirit of determined resistance to the tyranny under which they groaned, that Lord Macaulay is speaking when he says: "Hunted down like wild beasts, tortured till their bones were beaten flat, imprisoned by hundreds, hanged by scores, exposed at one time to the licence of soldiers from England, abandoned at another time to the mercy of troops of marauders from the Highlands, they still stood at bay in a mood so savage that the boldest and mightiest oppressor could not but dread the audacity of their despair."*

With the fall of the Stuarts, and the accession of William of Orange, this whole deplorable state of things came to an end. The *first* statute of the first parliament of Scotland under the new regime expressly rescinded the Act 1669 of Charles II, which had asserted "his Majesty's supremacy over all persons and in all causes ecclesiastical." The second restored the ministers who had been extruded "for not conforming to prelacy and not complying with the courses of the time," while the *fifth* statute of the same parliament adopted and incorporated that article of the Claim of Right of the Estates of Scotland in which it is declared "that prelacy and the superiority of any office in the church above presbyters is and hath been a great and insupportable grievance and trouble to this nation, and contrary to the inclination of the generality of the people ever since the reformation, they having reformed from popery by presbyters, and therefore ought to be abolished." And further the statute in question ratified and established, in room of the abolished prelacy, the Presbyterian church government, and also the Westminster Confession of Faith, which the Presbyterian Church of Scotland had adopted as its confession in 1649. In this confession the doctrine of that inherent jurisdiction in matters spiritual, to which reference has been already made, as asserted and contended for at the reformation, is laid down in these explicit terms: "The Lord Jesus, as king and head of His Church, hath therein appointed a government in the hands of church officers distinct from the civil magistrate" (chap. xxx). And again, "the civil magistrate may not assume to himself the administration of the word and sacraments, or the power of the keys of the kingdom of Heaven"

* "History of England," vol. i, p. 187.

(chap. xxiii), the power, in other words, of exercising or controlling the discipline and spiritual government of the church.

To bring out the bearing of all this on the more recent controversy which produced the disruption of 1843, and brought the Free Church of Scotland into the position she now occupies as a self-supporting institution, it is necessary to mention that both in earlier and in later times it was chiefly through the introduction of lay-patronage in the appointment of ministers of the church that the courts of the State came into collision with those of the church. In the first book of discipline, already alluded to as drawn up by Knox and his coadjutors in 1560, the doctrine was explicitly laid down that "it appertaineth to the people and to every several congregation to elect their minister." Before the church had framed and adopted her second and more elaborate book of discipline in 1578, lay-patronage had been sanctioned by the civil power, and had come, more or less, into use, and accordingly in this second book it is strongly reclaimed against and set down as one of the "special heads of reformation" which the church craved. It was not till 1649 that this grievance was redressed, and that an act of the Scottish parliament was passed, discharging "for ever hereafter all patronages and presentations of kirks, whether belonging to the king or any lay patron, presbyteries, or others within the kingdom." This act, however, was swept away by the general act rescissory of Charles II, soon after the restoration, and it was not till after the revolution that the claim of the church on this subject was once more conceded, and patronage again abolished in 1690. It was under this condition of things, as regards the relation of Church and State, with patronage abolished, the royal supremacy in causes ecclesiastical set aside, and the church's confession of faith, in which her right of self-government is broadly asserted, formally embodied in an act of parliament, that the union of Scotland with England took place in 1707. By the treaty on the footing of which that union was agreed upon and consummated, those rights and privileges of the Scottish Presbyterian Church were declared to be beyond the cognizance of the British parliament, and unalterable for ever. All this, however, hindered not that within five years thereafter the anti-patronage act of 1690 was overturned, and patronage restored. Bishop Burnet says, and many other authorities affirm the same thing, that this was done "to weaken and undermine the (Presbyterian) establishment," while a much more recent writer, Lord Macaulay, speaking of this proceeding of the parliament of Queen Anne, and of the consequences which have resulted from it, makes the following important statement: "The British legislature violated the articles of union, and made a change in the constitution of the

“ Church of Scotland. From that change has flowed almost all the
“ dissent now existing in Scotland. * * * Year after year the
“ General Assembly protested against the violation, but in vain ;
“ and from the Act of 1712 undoubtedly flowed every secession and
“ schism that has taken place in the Church of Scotland.” *

The only other point to which it is needful to allude in order to bring out the cause of the disruption, and to explain the deep interest in that event which has been manifested by the Scottish people, is this, that even under the law of patronage a certain important right was always held to belong to the church courts on the one hand, and to the congregations on the other, in the case of every settlement of a minister. The principle on which every such settlement proceeded previous to 1843 was this, that the right of the patron respected the possession of the benefice, while the right of the congregation and of the church courts, respected admission to the cure of souls. Accordingly when the patron's presentee appeared before the presbytery within whose jurisdiction the vacant charge lay, not only was he subject to the trial by the presbytery of his life, literature, and doctrine, with a view to ordination, but before the presbytery took him on such trial at all, they sent him to preach in the vacant church, that the members of the congregation might have an opportunity of judging as to his gifts for their spiritual edification. After he had so preached, and at a subsequent meeting of the congregation, a document was placed in their hands for signature, known by the technical name of the *call*. This call expressed satisfaction with the presentee's character and qualifications, and declared their willingness to accept him as their minister. Without this call no settlement could take place according to the immemorial usage of the church. In the absence of such a call, signed by a reasonable number of the people, and still more in the event of their formally protesting against the settlement, it was held to be the right and duty of the church courts to set the presentee aside, and to call on the patron to nominate another. For a considerable time after the passing of the patronage act of Queen Anne, this view of the state of the law was frequently acted on by the courts of the church, and recognised as competent by the civil tribunals. Gradually, however, the party in the church courts favourable to a more rigid enforcement of the patronage act grew into a majority ; and under their guidance the call, though still, in every point and particular of its forms, retained, was in practice reduced to a nullity. The patron's presentee, even when the call was signed by only one or two persons and opposed by the overwhelming mass of the congregation, was intruded into

* “ Speeches,” ii, 180.

the charge, and sometimes by the aid of a military force. It was in this way that from 1736, when this policy was first introduced, those numerous secessions from the church establishment, spoken of by Lord Macaulay as resulting from the law of patronage, began to take place. In no case did those who seceded dissent from the doctrine, worship, or government of the church. They simply withdrew from what they regarded as a corrupt administration of the church's affairs. They took the church's standards along with them, and remained Presbyterians and Calvinists as before. And this state of things went on, secession constantly on the increase, and the Establishment losing ground, till the earlier part of the present century. Meanwhile a great change in the state of parties within the Establishment had been gradually going on. The evangelical party, otherwise called the popular or reforming party, had largely increased in strength. In proportion as its position in the general assembly became more influential, greater efforts were made to vindicate and enforce those views of the church's constitution, and of the rights of the church's members, in the calling and settlement of their ministers, for which this party had always contended. And accordingly, when at length in 1834 this party came to constitute the majority of the supreme court, and in consequence to have the direction of church affairs, the call of congregations in the settlement of their ministers was turned from a deceptive form into an honest fact.

It is not necessary for the purposes of this brief historical sketch, nor indeed would it be suitable in a paper of this kind, to enter at all into the question either of the competency of the church courts to make such a regulation as the one now alluded to, or of the merits of the regulation itself. On both these points there was much argument and much difference of opinion. Suffice it to say that, under the guidance of Sir James Moncreiff, the distinguished lawyer, and an eminent member of the general assembly of those days, afterwards so well known on the Scottish bench, and that of Dr. Chalmers, the clerical chief of the reforming party in the church, the regulation known by the name of the Veto Law was adopted in 1834. Under this law the settlement of ministers went on for some time without challenge. At length, however, a patron, whose presentee was set aside under it, brought the validity of the church's decision before the courts of law. The judgment of the Court of Session, pronounced in 1838, by a majority of eight judges to five, was adverse to the church, and this adverse judgment was confirmed on appeal by the House of Lords in 1839. This judgment brought matters to a crisis. The gravity of this crisis was aggravated by the fact that the grounds on which the majority of the judges based their decision appeared to the assembly to

strike at the very foundation of the church's right of self-government, even in matters the most purely spiritual. Negotiations with the successive Governments of the day took place, on the part of the church, with a view to obtain some legislative enactment by which a way out of these complications might be made, and by which the dangers which now threatened the peace and integrity of the church might still be averted. These fruitless negotiations extended over a period of nearly four years, during all which time the matters in dispute between the church and the courts of law, and which were getting more and more entangled by conflicting decisions, were incessantly discussed, not only in every court of the church itself, from the lowest to the highest, but in public meetings of the people, in almost every town and parish of Scotland. As the result of all this ever-extending and deepening agitation of the public mind, the old spirit of the church and of the country, with which past history had made the minds of all classes familiar, was powerfully evoked. At length, in the month of March, 1843, a motion made in the House of Commons for a committee of inquiry into this painful state of things, and in favour of which the Scotch members voted in the proportion of two to one, was thrown out by an overwhelming majority of the English and Irish members. The Government had previously and deliberately rejected the church's petition and claim of right adopted by the assembly of 1842. Discussion and controversy had come to an end, and for those who meant to adhere to that view of the church's constitution and of their own duty, on which the majority in the church courts in this great struggle had proceeded, the moment for action had come. The assembly of 1843 met at Edinburgh with the usual solemnities. All the arrangements for the grave and momentous step, then and there to be taken, had been previously and elaborately made. Immediately after the assembly had been constituted, the moderator, in presence of the royal commissioner, read and laid upon the table a protest in which the whole case for the majority of the assembly was embodied. It was signed by 203 of the members. Having done so, he at once withdrew, followed by all who had subscribed the document, and immediately thereafter, in a spacious hall, in which not fewer than 3,000 people were crowded together, constituted the first general assembly of the Free Church of Scotland.

Such were the circumstances which called into existence the financial system of which I am about to speak. The church which had thus, by its own voluntary act, separated itself from the State, had, as matter of course, left all its State endowments and emoluments behind. Every one of the 474 ministers, who then and there adhered to it, signed a deed of demission, by which he renounced all right and interest in the church, manse, glebe, and stipend,

which had belonged to him as a minister of the Established Church. The legal conditions of the church's establishment, had, in the recent conflict, as these men judged, been interpreted by the civil tribunals in a sense fatal to her spiritual independence. They believed that interpretation to be erroneous; but supported and sanctioned as it had virtually been by parliament and by the crown, they knew that it must thenceforth be accepted as authoritative and conclusive. As honest men and loyal subjects they accordingly felt that, for them, there was but one course open; that, namely, of surrendering, as they had now done, a position which they could no longer with a good conscience retain. But they had no thought of abandoning either their office or their work. The church had existed before it received any State establishment, and they ventured to believe that it could and would exist after its State establishment had ceased. For three centuries the primitive church made its way in the world, in so far as its means of temporal support was concerned, without any help whatever from State countenance or aid; and during these centuries it not merely stood its ground, but made conquests upon a scale with which it would perhaps be difficult to find anything in its subsequent history that could advantageously compare. Tertullian, the most ancient of the Latin fathers, who was born less than a century after the fall of Jerusalem, found himself in a position, in his famous "Apologia," to meet the opponents of Christianity with the triumphant statement that although only of yesterday it had already all but overspread the vast empire of Rome. "Hesterni sumus, et vestras omnes imple-
"vimus urbes, insulas, castella, municipia, conciliabula, castra
"ipsa, tribus, decurias, palatium, senatum, forum" ("Apologia," c. xxxvii). Unfortunately, however, there is so little recorded of the precise plan or method, according to which, what Scripture calls the "outward business" of the house of God was carried on in those early times, that the Free Church could obtain little guidance from that source of information in dealing with the financial problems it was called upon, all at once, to solve. The general belief, among those who have most closely examined the question, appears to be that the system of supporting the clergy of the Christian church by tithes, did not come into use till the fourth century. Previous to that period the voluntary oblations of the Christian people were chiefly relied on for the supply of the church's temporal wants. These oblations, according to the authorities quoted by Bingham, were of two sorts—the *weekly* oblations that were made by those who came to partake of the eucharist, and the *monthly* oblations that were cast into the treasury of the church. To these were added, as the converts to the Christian faith multiplied, gifts of lands or houses, which, indeed, became in

the course of time so considerable as not only to have tended to secularise the clergy, by involving them in the care and management of this ever-accumulating property, but also to dry up the weekly and monthly offerings, these being supposed by the people to be less urgently required. Referring to this tendency of the one source of support seriously to injure the other, Bingham takes occasion to make the following significant statement: "If any one is desirous to know what part of the church revenues was anciently most serviceable and beneficial to the church, he may be informed from St. Chrysostom and St. Austin, who give the greatest commendations to the offerings and oblations of the people, and seem to say that the church was never better provided than when her maintenance was raised chiefly from them. For then, men's zeal prompted them to be very liberal in their daily offerings, but as lands and possessions were settled upon the church this zeal sensibly abated; and so the church came to be worse provided for under the notion of growing richer, which is the thing that St. Chrysostom complains of in his own times, when the ancient revenue arising from oblations was in a great measure sunk, and the church, with all her lands, left in a worse condition than she was before."* That experience of the primitive church would seem not indistinctly to indicate that the Free Church of Scotland was well advised in founding, as she did, her financial system, not on two sources of revenue, but only on one. In point of fact, the circumstances in which she found herself placed, left her scarcely any choice but that of casting herself for the means of support, at once and entirely, on the system of free-will offerings,—as these might be supplied by her people from month to month and from year to year. She could not afford to wait till the sum, which it would have required to provide a permanent endowment for the support of her ministry should be raised; and any attempt to combine the two systems, of endowments and free-will offerings, together would inevitably have proved unworkable, by their fatally paralysing one another. The grand characteristic peculiarity connected with the position of the Free Church when she constituted her first general assembly in 1843 was this, that everything requisite for her outward equipment and maintenance had to be provided at once. So far as the living *materiel* of the church and its whole constitution in doctrine, worship, and government were concerned, all was already complete. She had not only a body of nearly 500 ministers, with elders in due proportion, and many hundreds of thousands of people who had all, in one day, so to speak, left the Establishment; but this body of ministers, elders, and people had come out "harnessed," as the

* Works, vol. ii, pp. 174, 175.

children of Israel went up out of the land of Egypt. They had come out, in other words, in ecclesiastical array; not as a rabble, but regimented as congregations, for the most part duly officered, and as courts, duly organised. But so far, on the other hand, as the means of sustaining these ministers, and of having the ordinances of the gospel steadily dispensed to these congregations, were concerned, everything had yet to be done. The church had not a shilling to give to any one of these ministers in the way of a living, nor a house in which they and their families might reside, nor a place of worship in which they might assemble with their people for prayer and for the preaching of the word of God. Those to whom reference has been made, as having been driven at an earlier time into secession from the Established Church,—by the oppressive way in which the law of church-patronage was administered, and by other practical grievances,—had come out in limited numbers, and had grown to what they have since become, only by slow degrees. Their origin was a *genesis*; that of the Free Church was an *exodus*, as has been already explained. Beginning in these widely different circumstances, it was quite natural that their financial arrangements should have exhibited differences of a corresponding kind. They had no call, like the Free Church, to grapple with the religious wants of the country at large, on anything approaching to a national scale. They had to look only, and especially in the first instance, to the comparatively narrow circle of their own immediate adherents. And as their congregations were thus not only few in number, but located for the most part in populous districts, and composed of persons possessed of some worldly means, each congregation was for the most part in a position to support its own minister, and to provide whatever was needed for carrying on its work. And what was true of those older nonconformists in Scotland, was true to a large extent of almost all the nonconforming churches in England and elsewhere. Even the expulsion which took place of 2,000 ministers and of multitudes of their people from the Established Church of England by the rigid enforcement of the Act of Uniformity in 1662, hardly forms an exception to the state of things I have described. For, though their numbers were great, they had no liberty to combine or to act in concert. Broken up and dispersed and harrassed by the harsh edicts with which they were everywhere pursued, they had far more than enough to do to keep alive the principles for which they endured all these privations and sufferings, in their own hearts, without attempting to diffuse and perpetuate them over the country at large. Perhaps, indeed, it would be difficult to find in the whole range of church history a case at all parallel to that of the Free Church of Scotland. Possessing adherents, more or fewer, not only in every county, but

in every parish of the northern kingdom, and formally claiming to represent the national church, necessity was laid upon it to set up and sustain the whole equipment of a church all over the length and breadth of the land. Till then it had been accepted almost as an axiom that, without the public resources supplied by a national church establishment, provision could not be made for the support of religious ordinances on a national scale. In thickly-peopled and wealthy districts it was, of course, seen and admitted that a self-supporting church might contrive to keep its ground; but, in such regions as the Highlands and Islands of Scotland, any such achievement was commonly regarded as simply impossible. In point of fact, down to the year of the disruption, there was scarcely a non-conformist minister or place of worship between the Grampians and the Pentland Frith. It was, therefore, a state of things such as no other church, unconnected with the State, had ever before been called to face, which confronted the Free Church of Scotland in 1843. Not only did immense multitudes in all the cities and towns, and in nearly all the rural parishes of the Lowlands at once give in their adherence to her principles and to her communion, but the population of the Highlands and Islands took her side *en masse*. It needs only to mention these things in order to make it abundantly manifest that any financial system that was really to meet the necessities of such a case must be one which would combine the resources of the whole body, so as that the strong might thus help the weak, and that, as in the case of the manna on which the Israelites fed in the wilderness, the richer congregations which gathered much should have nothing over, while those which, owing to their poverty, could gather little of their own, should, nevertheless, through means of the overplus of others, have no lack.

It was under the influence of such considerations as these that the Free Church at once and unanimously adopted, as the backbone of her financial system, the plan of a common fund, to the support of which all her congregations should contribute, and in the benefits of which all her ministers should share. With whom the central idea of this scheme originated it is impossible to say. The very nature of the case was such as almost inevitably to suggest it, to any one who was seriously and intelligently considering the subject. Of one thing, however, there can be no possible doubt or question, that the authorship of the system of finance, into which the idea now spoken of was gradually developed, belonged to Thomas Chalmers. It had taken shape in his mind, and in at least some of its leading features had been put in writing by his pen, in the summer of 1841. It is true that in the autumn of the same year, and without any knowledge of the views or plans of Dr. Chalmers, the principle of a common fund, to be distributed in equal shares, was given out by Dr. Candlish at

a great public meeting, held at Edinburgh, in anticipation of the event which, even then, had begun to loom out, not indistinctly, through the storm and tempest of the time. It was not, however, till the month of November, 1842, that it took the form of a fully-planned scheme for the future support of the church, drawn out in detail and supported by elaborate argument. This form it assumed in a speech of great power and eloquence, which is still preserved, and which was delivered by Dr. Chalmers at a very memorable meeting. The meeting to which I refer was called "the convocation,"—a name familiar enough in England, though descriptive, there, of a quite different assembly. The Scotch convocation was not a court, but simply a private, unofficial conference of ministers interested in the common cause of the, then, impending disruption. They met alone, because they desired to look their position, prospects, and responsibilities calmly and prayerfully in the face, without being liable, under the influence of public feeling, to be either turned back, or to be carried further or faster forward in the direction in which events were moving, otherwise than as their own deliberate judgment and sense of duty might seem to them to sanction and require.

In laying his financial scheme before this meeting Dr. Chalmers began by saying, "I do not want to hasten your decision beyond what, on its own proper grounds, you might deem to be right and necessary. But, on the other hand, I should like to see removed out of the way aught which might hinder, or even cause a hurtful delay, in our adoption of what ought to be the final decision of the church on the matters which are now pending, or, in one brief sentence, I should like to demonstrate the grounds on which, should the worst come to the worst, I look for the stability of our present Church of Scotland in these lands, even should the fostering care of the State be withdrawn from her, and should she be severed from all her present endowments and civil immunities by the hand of violence."

"The arithmetic," he went on to say, "on which, under God, I found the confidence I feel, is soon told. It is not because I count on a multitude of great things. These may be either more frequent or more numerous than I shall attempt to specify. But I do count on a multitude of little things. It is not on the strength of large sums that I proceed, it is on the strength and accumulation of littles. I am not looking for much that is remarkable in the way either of noble efforts or of noble sacrifices; nor yet is it on the impulse of strong but momentary feeling that I at all reckon. It is on the assiduities of habit and principle, such as a very common and every day exertion in each district of our land might secure if begun, and such as the general influence

"of custom alone might suffice to perpetuate. Such is the character —the plain, unimaginative character—of the premises with which I am now dealing; and the conclusion I draw from them, what I call my minimum result, because the very least to which I aspire is a hundred thousand pounds in the year."

After a lengthened exposition of the grounds on which he based an expectation which most of his hearers regarded with great incredulity, he summed up his statement as follows :

"*Firstly*, then, the money raised in any given locality ought not to be reserved for the expenses of that locality. All the means raised throughout all the localities should be remitted to a large central fund, whence a distribution of it should be made of the requisite sums or salaries for the ministers of all our parishes. The benefits of such an arrangement are manifold and inestimable. It becomes an operation of infinitely greater delicacy and good taste when the offerings called for, in any given neighbourhood, are not for the direct and personal behoof of their own clergyman. He could do nothing to extend or stimulate such a process. But his deacons and even himself might, without the violation of decorum, bestow upon it their full countenance and activity when seen in its true character, as part of a general scheme for the high patriotic object of supporting a ministry of the gospel throughout the whole of Scotland."

"*Secondly*, And what gives a still more disinterested character to the scheme is the noble resolution announced at the memorable meeting held in the West Kirk (of Edinburgh), in the month of August, 1841, wherein the town ministers—the ministers of the most opulent parishes, and whence the largest contributions will be made to the general fund—agree to share and share alike with the ministers of the poorest parishes in Scotland. This law of equal division among the clergy will give rise to the operation of pure and high principle both in the rich and in the poorer parishes. The liberality of the former will be stimulated, not by the near and narrow consideration of a support for their own minister, but by the great and soul-expanding consideration that they are helping out a provision for the gospel in the most destitute localities of the land. And the efforts and sacrifices of the latter will be stimulated by the honourable ambition of raising their contributions as near to the dividend as possible." * * *

"But, *thirdly*, you will observe that on this system of the equal division, right and beautiful as it is, yet did our financial operations stop here, and proceed no farther, then the clergy in different parts of our establishment, with nominally the same means, might yet fare very unequally." After explaining how this inequality would necessarily arise under such an arrangement, owing to the

great differences in the cost of living, house rent, &c., in towns, as compared with the same charges in remote and rural parishes, he went on to say, "It is for this reason that our financial system ought not to stop at the lowest point to which I have yet carried up my explanation of it. There is one step more * * * After that the organisation had been set up in each parish for behoof of the general fund, or, in other words, after that an association has been formed and put into regular working order for the raising and the remitting of its quarterly or yearly proceeds to what may be called the great central treasury of the church, there can be no objection, nay, it were most desirable, that a distinct supplementary effort should be made in each parish for the express purpose of eking out and extending the allowance of its own minister."

Under a fourth and last head Dr. Chalmers laid it down as an essential feature of his scheme that means should be provided, in connection with it, for the extension of the church, for not only sustaining the existing ministry, but for increasing their numbers, as occasion might require. Having completed the sketch of his financial scheme, he concluded thus :

"It is not to speed, and far less to overbear, your determination that we have endeavoured to set this argument before you ; but to remove, if possible, disturbing forces in the way either of clearly perceiving or of righteously judging where it is that the path of duty and of rectitude lies." * * * * "The thing for present decision is not whether *now* the church shall cut connexion with the State, but what now shall be our language to them who have the power and authority of the State in their hands. And I confidently ask, on the premises which I have tried, however imperfectly to lay down, whether this ought to be a language of irresolution and timidity, of men in perplexity, because their hearts are failing them for fear, and ready in the least to recede or to compromise because of the approaching ruin that is now, in the scared imaginations, perhaps, of a few, opening to engulf and swallow up the majority of ministers in Scotland. My prayer is for an unfaltering progression in a steady rectilinear course, and that you may never be tempted to subordinate the kingdom which is not of this world to the government of this world's powers."

Such was the earliest sketch in outline, that had then been anywhere presented, of the future financial system of the Free Church of Scotland. In the course of the six following months which intervened between the convocation and the disruption, a committee was formed which, under the energetic presidency of Dr. Chalmers, laboured incessantly in diffusing information through-

out the church as to the leading features and objects of the proposed scheme, and in framing and setting in motion the machinery by which it was to be carried into effect. An important beginning had in this way been made by the time the disruption took place, so that when the great event of the church's separation from the State arrived, steps were already everywhere in progress for securing its maintenance in its disestablished condition. When the first meeting of its assembly was held, Dr. Chalmers was able to announce that no fewer than 687 congregational associations had been formed for the raising of the necessary funds. Of these associations, 239 were by this time in complete working order, and had sent up to the central fund for the sustentation of the ministry 17,000*l.* Besides this, very nearly 105,000*l.* had been contributed for the erection of churches. Encouraged by these cheering first-fruits of the people's sympathy, the assembly addressed itself at once to the great task which lay before it, of giving formal sanction and authority to the financial system which had been *improvised* in the manner now described, modifying and adjusting it at the same time in its details as experience and further consideration seemed to require.

And here, at this stage, it may be proper and needful to explain a little the constitution of the church itself, as otherwise it may be difficult, if not impossible, to make intelligible the arrangements under which the financial system, thus inaugurated, is administered and carried on. For such a work the large infusion of the lay element, which pervades all the courts of the Presbyterian Church, affords important facilities. The Presbyterian Church recognises three classes of office-bearers: *ministers*, whose function is to labour in the word and doctrine, and to take part in ruling the church; *elders*, whose duty, along with the ministers, and under their presidency, is to take the spiritual oversight of the congregations to which they belong; and *deacons*, whose business it is to take charge of the poor, of the funds of the church, and of its temporal interests and affairs generally. Previously to the disruption the office of deacon had fallen largely into disuse, chiefly, no doubt, from the circumstance that, in a church endowed and upheld in all its external requirements by the State, there was comparatively little for the deacon to do. It was accordingly one of the very first effects of the disruption to revive the deaconship which, in the church's altered circumstances, had become an immediate and urgent necessity; and for the purpose of giving to this restored deaconship its proper place and work, a body was created by the assembly in every congregation, called the *deacons' court*. Of this body, the minister is the official head, and the elders and deacons are the constituent members. All these office-bearers, the

minister included, are chosen by the communicants of the congregation. In all ordinary cases, accordingly, they have the full confidence of the congregation, and can count on its support in carrying on the work committed to their hands. Such a court is, so to speak, a ready-made instrument in every congregation for the management of that financial system, the origin, nature, objects, and results of which it is the purpose of this paper to explain. In the event of any dispute or difference of judgment arising in this court, which they find themselves unable to settle, it may be carried by reference to the court next in order above it; that is, to the *classis* or presbytery, which corresponds somewhat to the diocese of a bishop in the episcopal church, and which has the oversight of a certain number of conterminous congregations, and is made up of the ministers of these congregations and of one elder from each of them. This second court, the presbytery, which meets monthly, or oftener, or less often, as occasion may require, in addition to the jurisdiction it possesses in the cases which may be sent up to it for decision, has a general right and duty of seeing to it, that the laws of the church, and the instructions of the assembly in all matters, be duly carried out by the courts of the congregations within its bounds. Above the presbytery there is the provincial synod, which meets half-yearly, and which is a cumulative body, made up of the presbyteries included within its territory; and over all these other courts there is the general assembly—the supreme court of the whole church, which meets once a-year, and which is representative,—consisting of a fixed proportion, *one-third*, viz., of the members of each presbytery; the ministers and elders so chosen being equal both in point of numbers and in point of authority.

Keeping this ecclesiastical organisation in view, it will be easily seen what advantages it supplies for both putting, and keeping, in operation such a financial system as the one I am attempting to describe. The general assembly, consisting as it does of representatives from every part of the church from the Solway to the Shetland Isles, and from Aberdeen to the Outer Hebrides, has always the means of the most direct and immediate communication with even the remotest extremities of the church; and in order that this action and oversight of the supreme court may be practically maintained all through the year,—in the way of constantly guiding and stimulating the whole body of deacons' courts, and congregations and presbyteries, in the discharge of their respective duties in relation to the church's financial system in all its departments,—it has standing committees, whose special business it is to watch over, receive, and administer, under its direction and authority, all the funds of the church.

And here let me first speak of what belongs to the chief branch of this financial system—the sustentation fund. This fund, as already stated, has for its one great object the support of the ministry, to the extent and effect of at least securing for each minister a certain *minimum* stipend. From the first it was the aim of the church to bring up this minimum to 150*l.* This minimum, however, was not reached till the year 1868, and this chiefly in consequence of the large increase that was constantly taking place in the number of ministers among whom the fund fell to be divided. Very soon indeed after the disruption, Dr. Chalmers became doubtful of the expediency of adhering to the system of the equal dividend, and succeeded, in 1844, in inducing the church to adopt a different system in the case of all charges sanctioned after that date. The system in question was that of granting out of the central fund 50 per cent. to be added to the amount which any aid-receiving congregation itself contributed to the fund. The congregation, in short, got back its own contribution with a half more added to it, up to the point at which the two sums combined made up the minimum of 150*l.* If it gave 60*l.* it received 30*l.* in addition, making 90*l.* in all. If it gave 100*l.* it received 50*l.* in addition, thereby making up the full sum of 150*l.* Upon this system, which was called the half-more scheme, it will be seen that 50*l.* was the maximum of aid which any congregation could receive from the common fund. This system was, however, abandoned by the church in 1848. It had been from the first opposed by very many, and the complaints against it became at last so strong that it had to be given up altogether. Its great recommendation was the sharp stimulus it applied to the poorer class of congregations to do their utmost, in order to make up a living for their minister. The objections which caused it to be given up were, first, the painfully dependent position in which it placed so many ministers, and next the inadequacy of the support it afforded them. The equal dividend system, with the exception of a slight and short-lived modification, has accordingly been ever since maintained as regards the great body of the ministers of the church. The only exception to it, indeed, is that of the ministers of what are called *church extension charges*. These new charges are not put on the platform of the equal dividend fund until after a period of probation, during which they are aided by grants from the home mission fund and other funds. After they have become thoroughly organised and consolidated, and have become habituated to the making of suitable efforts towards their own support, they are gradually, and by a regulated process, placed upon the firmer and more permanent footing of the equal dividend fund. It is the law of the church, and is indeed a principle involved in the very nature and object of this fund itself, that an association should

exist in every congregation for the express purpose of supporting it. Of the forming and keeping up of this association the deacons' court have the responsible charge; and of this association it is their duty to endeavour, by kindly and Christian means, to induce all who belong to the congregation, and especially the communicants, to become members. In carrying out this duty it is the business of the deacons' court to have the congregation subdivided into small and manageable sections, and to assign to each of these sections an elder and deacon, to whom it belongs to visit every individual or family belonging to their section, to explain to them the nature, objects, and importance of the sustentation fund, to press upon them the duty of supporting it, and to note down what each person or family agrees to contribute. In his original sketch of the scheme, Dr. Chalmers spoke of the contributions as quarterly or yearly. From the first setting up of the scheme, however, the rule was laid down that, as far as possible, the contributions should be monthly, thus returning to the *menstrua dies* of the offerings of the primitive church. It was very early seen that this subdivision of the annual sum into monthly payments was far more productive, because far more suited to the circumstances of the great mass of the people. In order to gather in these monthly offerings, either the deacon personally, or a member of the congregation acting as collector under his direction, makes, every month, the round of the families of the district, and receives their contributions, and enters the names and sums in his district book. The deacons' court, on the other hand, holds a stated monthly meeting, at which these contributions are received and handed over to the congregation's treasurer for the fund, by whom they are all recorded in a register which he keeps for the purpose, and which contains the names of all who belong to the congregation. This register and all the corresponding district books are regarded as confidential documents by the office bearers of the congregation, and no public use is made of them whatever. At this point, and in this connection, it may be proper to mention that the Free Church neither asks nor allows to be received any fee, or other payment, for any religious ordinance. Nothing, indeed, in the church's administration is more strictly attended to, than the keeping of money altogether apart from admission to any spiritual privilege. In the towns where pew-rents have existed for generations in churches of all denominations, established and unestablished, they exist in the Free Church too. But in the great mass of the rural parishes, and universally in the Highlands and Islands, the churches are open to all comers, without charge of any kind. There is a collection-plate at the church door, into which the attenders on public worship cast in an offering, or not, as their hearts prompt or their means allow. And as regards contributing to the sustentation

fund, not only is no particular sum fixed or even named as the sum to be given by any individual, but no church privilege is withheld from anyone, even if, though well known to be able to contribute, he should think fit to give nothing at all. And herein lies the peculiarity which differentiates the finance of a State from that of a Christian church. Speaking of the former, in his "Wealth of Nations," Adam Smith says, "The subjects of any State ought to contribute towards the support of the Government as nearly as possible in proportion to the revenues which they respectively enjoy under the protection of the State. The expense of government to the individuals of a great nation is like the expense of management to the joint tenants of a great estate, who are all obliged to contribute according to their respective interests in the estate. In the observation or neglect of this maxim," he adds, "consists what is called the equality or inequality of taxation."* It is the word "obliged" in this quotation upon which the difference between payments to the State, and contributions to a self-supporting church, turns. The moral obligation to supply what is needed may, in both cases, be substantially the same; but while the State can lawfully impose upon its subjects its own estimate of what they ought to pay, and can exact it from them, the church can neither impose nor exact its own estimate, nor indeed any estimate whatever, of what they are to give, upon any of its members. The inequality of State taxation may be got rid of by parliament, guided by a wise and skilful Chancellor of the Exchequer, but the inequality of church contribution cannot be so done away, by even the most experienced managers of a sustentation fund. The dynamics of church finance lie, not in the physical force which silently backs the tax gatherer's demand, but in the region of conscience alone. What the church member shall give, or whether he shall give at all, is a question between himself and God; a question in which he may be advised and exhorted, but on which he may not, by any human force, be compelled. He to whom the offering is professedly brought will not have it given grudgingly or of necessity. It has and can have no acceptance with Him save in so far as it is brought, not by constraint, but willingly. And hence the true secret of abiding success for any system of church finance, however wisely planned, will be found chiefly and ultimately to depend on the church's own practical efficiency, in sustaining and cultivating the moral and spiritual life of its members. Superstition, indeed, may thrive and grow rich among an ignorant population; but, in an intelligent community, true religion can obtain adequate support for its ordinances and institutions only in pro-

* Vol. ii, pp. 255, 256.

portion as it is accomplishing its high ends in the hearts and minds of men. If this greatest of all the *factors* out of which the result comes be not taken into account, no reliable calculation as to the efficiency of any system of church finance can be made. It is for this very reason I have thought it necessary, in the earlier part of this paper, to explain the causes which threw the Free Church on the support of its members, and to bring out the fact that these causes were of a nature to touch powerfully and lastingly some of the deepest religious convictions and sympathies of the Scottish people.

To complete the view now submitted of the oversight and management under which the financial system for the support of the ministry of the Free Church is carried on, it is necessary to advert to the functions of the committee to which the charge of the sustentation fund is specially entrusted. This committee is appointed annually by the general assembly, and consists of about a hundred ministers and elders, in nearly equal proportion, nominated by the assembly, and of one member, who may be either minister or elder, nominated by each of the fourteen synods of the church. This committee meets once a month at Edinburgh, and is usually attended by about sixty members. Of this committee the author of this paper has had the honour to be convener and chairman ever since the death of Dr. Chalmers, in 1847. It has a paid secretary, with a staff of clerks, who carry on their work in the offices of the Free Church in Edinburgh, a large establishment in which all the standing committees of the church have apartments for the conduct of their business, and in which also is the office of the general treasurer of the church. At the monthly meetings of the sustentation fund committee the secretary reports the state of the fund, and attention is called by the convener or secretary, or by any of the members of the committee, to anything that may appear to be defective in the state and working of the fund in any particular congregation, and that seems to require attention. If necessary, the committee may, in consequence, send a deputation to visit the deacons' court of the congregation concerned, to ask explanations and to suggest suitable remedies. When any charge becomes vacant by the death or translation of its minister, the presbytery within which the charge is situated is required by the law of the church to appoint a committee of its own number to meet with the deacons' court of the vacant charge; to inquire carefully into its arrangements for supporting the sustentation fund; to require that a special visitation of all the families of the congregation be made, with a view to ascertain whether any increase to the contribution to the central fund can be made. As the result of this proceeding, the deacons' court have to fill up, under the oversight of the presbytery's committee, a printed

schedule of queries sent down for this purpose by the sustentation fund committee. The object of this schedule is to ascertain the numbers belonging to the congregation, the number of its communicants, elders, and deacons, the amount of its contributions to the central fund, the number who contribute above or below certain rates, and the total sum which it is expected by the deacons' court that the congregation will contribute under the new incumbency then about to begin. This schedule must, in every case, be sent up by the presbytery to the sustentation fund committee; and if that committee should be of opinion that the proposed contribution is unsuitable to the numbers and resources of the congregation, the committee have authority to delay the settlement till a satisfactory adjustment is reached. If the congregation be dissatisfied with the committee's judgment, the case may be referred to the general assembly. But, in point of fact, no such reference has ever been made. In every instance the committee and the congregation, contrive to come to a friendly settlement of any question that may arise between them. It is also a law of the church that if any congregation that is not self-sustaining shall prove manifestly negligent of its duty as regards the supporting of the sustentation fund, it shall be liable, at the end of the current incumbency, to be reduced from the position of a sanctioned ministerial charge to that of a mere preaching station. There has, however, hardly been a single instance in which this law has needed to be enforced. On the subject of the sustentation fund, the only other thing that needs to be stated is, that under a resolution adopted in 1867, whatever remains over of that fund, after paying to each minister his equal dividend of 150*l.*, is dealt with as a surplus fund. In this surplus fund only those ministers are entitled to share whose congregations contribute to the fund at a certain average rate. If their average rate be 7*s.* 6*d.* per annum for each communicant, the minister of that congregation receives, in addition to his equal dividend, one share of the surplus. If their average rate be 10*s.*, their minister receives two shares. In the year ending 1869 this surplus fund amounted to 4,023*l.* 1*s.* 10*d.*, of which 202 ministers received 5*l.* each, and of which 316 ministers received 10*l.* each. The object of this surplus fund is to stimulate congregations to rise to higher rates of giving.

It is now nearly twenty-seven years since this new system of church support, through the medium of a common central fund, began—a period quite long enough to exhaust any mere excitement or enthusiasm connected with the great event in which it originated, and to test the worth and sufficiency of the more permanent forces inherent in the ordinary working of the system itself. What, then, has been the history of this central fund for the sustentation of the

ministry from 1843 to 1869, and what has it achieved? Its history has been one of steady growth, as will presently be shown. But before adverting to the table necessary for this purpose, let me first notice the increase that has taken place since 1843 in the number of ministers among whom the fund is shared.

To show what this sustentation fund has achieved it is necessary to explain that, instead of 474 ministers, as at the date of the disruption in 1843, the Free Church at the date of the General Assembly, 1869, had 900 ministers.* Of these ministers, 46 were colleagues, associated each with a senior minister more or less incapacitated by age or infirmity for the entire charge of his congregation, and 82 were ministers of church-extension charges—charges, that is, recently instituted, and not yet raised to what is called “the platform of the equal dividend.” The number of ministers, colleagues excluded, on that platform, accordingly was 772; and all of these, save those of their number who had not been a full year in office, were entitled to a full equal dividend. The equal dividend which the sustentation fund was able to provide for each of 470 ministers who drew a whole dividend at the assembly of 1844 was 100*l.*; the equal dividend which that fund was able to provide for each of 740 ministers who drew a whole dividend at the assembly of 1869 was 150*l.* In the case of those ministers who have colleagues, this dividend is equally divided between the colleague and the senior minister. Table No. I in the Appendix will show both the progress of the fund and the increase of the number of ministers sharing it.

In order, however, to bring out the entire result of the financial system of the Free Church, in so far as the support of the ministry is concerned, it is necessary to recall attention to the fact that the central fund is not the only source from which that support is derived. As Dr. Chalmers, in his original draft of the scheme, suggested, it not only leaves it open but expressly invites and encourages every congregation to supplement, by its own local efforts, the stipend of its own minister. This supplement is usually derived from pew-rents and from the weekly offerings at the church door. These, which are strictly congregational funds, and left entirely under the management of the congregations themselves, through their deacons’ courts, amount in all to an annual sum very nearly equal to that of the central sustentation fund itself; and its history, like that of the sustentation fund, has, since 1843, been one of continual progress. In 1843-44 it amounted to 41,549*l.* 11*s.* 10 $\frac{3}{4}$ *d.*; in 1868-69 it amounted to 126,445*l.* 13*s.* 10 $\frac{3}{4}$ *d.* This large and important branch of revenue is applied, at its own discretion, by each

* The number of *charges* was 918, but 18 were vacant at Assembly 1869 by death or removal.

congregation, acting through its deacon's court, to meet all ordinary current expenses,—such as church repairs, taxes, salaries of church officers, precentor, &c., and in many cases the salary of its congregational schoolmaster and local missionary, &c. But also, from this fund, the supplementary stipend of the minister is derived. The amount so applied last year in supplementing the stipends of 606 ministers was 46,891*l.* 3*s.* 6½*d.*

In order, however, to exhibit the entire sum contributed by the church for the support of her ministry, it is necessary to include certain other funds of a special kind, and having special objects in view. These are such as the following:—1. The aged and infirm ministers' fund, the object of which is to provide for such ministers retiring allowances. 2. The pre-disruption ministers' fund, which is designed to augment the stipends of those ministers of that particular class who have had to make, at the time of the disruption and since, the largest pecuniary sacrifices. 3. The supplementary sustentation fund, which is a small capital fund, the interest of which is employed in adding to the stipends of ministers not on the platform of the equal dividend. 4, and last. *grants* made annually from the home mission funds of the church to ministers of mission charges. Adding the sums derived from these several sources to the congregational supplements and to the central sustentation dividends, the entire amount paid last year in support of the ministry of the Free Church was 190,224*l.* 1*s.* 5*d.*

In an earlier part of this paper reference was made to the fact that, as the consequence of the disruption, the Free Church had not only to provide means for supporting its ministers but also for building places of worship, manses, or parsonages, and elementary schools. I shall now, therefore, briefly notice the financial arrangements made for this purpose:—

The number of churches built by the Free Church is	920
„ manses „	719
„ schools „	597

To defray the cost of erecting these numerous and expensive buildings, two separate classes of funds were raised,—the one local, the other general. Each congregation, in other words, requiring church, manse, or school, was called upon to go as far as it was able in the way of raising the funds required for this purpose from among its own members. To stimulate and aid these local efforts a general fund was at the same time raised, by an annual collection made over the whole church, and out of which grants were made according to the necessities of each particular case. Under this arrangement the wealthier congregations contributed largely to the general fund, but took nothing from it, providing for their own

buildings by their own local efforts alone. The Table No. II in the Appendix will show the sums obtained for these funds, general and local, in each of the years from the disruption downwards.

As will be seen by reference to that table, the total amount thus raised and expended for church, manse, and school building during the twenty-six years which have elapsed since May, 1843, is as follows:—

	£	s.	d.
General building fund	355,452	7	5
Local „	1,312,272	11	6½
Total of building funds for the above } purposes	1,667,724	18	11½

To this sum at least 100,000*l.* should be added, as having been expended on buildings by the local parties, the funds to meet which are in course of being raised.

It thus appears that the average annual sum so raised and expended amounts to 64,413*l.* 4*s.* 7*d.*; and as in even the very last of these twenty-six years the above average is very nearly sustained, it shows that the work of church, manse, and school building continues to go steadily on. Of the total sum thus expended in buildings, there has been laid out:—

	£
On churches	1,015,375
„ manses	467,350
„ schools	185,000
	1,667,724

In addition to the above edifices connected with her equipment, the Free Church has also erected three *theological colleges* for the training of her candidates for the ministry, viz.: one college at *Edinburgh*, another at *Glasgow*, and the third at *Aberdeen*. For the building of these colleges she has raised and expended about 55,000*l.*

In connection with these colleges there are thirteen professors, and the number of students of theology in attendance at these colleges last year was 241. All of these students, as required by the law of the church, had previously attended a complete undergraduate course of four years' study at one or other of the national universities; and their course of theological study also extends to four years. One of these theological colleges is endowed, having a fund for that purpose of 35,000*l.*, obtained from subscriptions, donations, and legacies. The other two are partially endowed by funds which amount at present to 35,330*l.* For their support otherwise, these colleges depend chiefly upon an annual collection made by all the congregations of the church, and which has amounted, on the average, to nearly 3,000*l.* a-year. In addition to these sources

of support there are also the students' fees, which amounted last year to 95*ol.* 12*s.*

In connection with these theological colleges there are also bursary and fellowship funds, which are all of the nature of endowment funds, not annual but permanent, and which have been obtained from donations and legacies. These funds, for Edinburgh College, amount to 27,260*l.*, and yield, in the aggregate, a yearly income of 1,116*l.* Those for Glasgow and Aberdeen amount to 30,625*l.*, yielding an annual revenue of about 1,225. The bursaries and fellowships are all obtained by competitive examination.

	£	s.	d.
The total sum raised for college purposes since the disruption is	211,888	17	4
Add building, bursary, and endowment funds not included therein	80,625	-	-
Total	292,513	17	4

Mention has been already made of the amount expended by the Free Church on her school buildings. For the support of these schools, in the form of salaries to their 603 teachers, there has been contributed, through her central school fund, 245,207*l.* 10*s.* 4½*d.* Besides which, there have been local contributions for the support of the schools which do not enter into the public accounts of the church, amounting to about 170,000*l.*, thus raising the total to 415,000*l.* The church has also erected and maintains two large and flourishing normal schools for the training of teachers. These two schools have at present in attendance 1,645 scholars and 252 students, of whom 101 are male and 151 female students. These schools are maintained partly by the fees of the scholars and students, partly by salaries from the church's education fund, and partly by Government grants. Like all the schools of the Free Church, the normal schools are open to all denominations, and are, in point of fact, taken advantage of largely by scholars and students belonging to almost every branch of the Christian church. The fund for the support of the teachers—commonly called the schoolmasters' fund—is raised in precisely the same way, and by the same agency, as that for the support of the ministers. Its ingathering and administration are under the charge of a standing committee of the general assembly, known as the education committee. To this fund all the congregations are recommended to contribute, but compliance with this recommendation is not regarded nor treated as of the same primary obligation with the sustentation fund, and is not, therefore, enforced by any formal law of the church. The sum thus raised for the schoolmasters' fund has amounted on the average to nearly 10,000*l.* a-year, to which there is added locally about 8,000*l.* more.

To complete this view of the finance of the Free Church it only remains to notice her mission funds for the propagation of the gospel at home and abroad. These mission funds are five in number, and the total sums raised since the disruption are as follows:—

1. Home mission fund, of which there are two branches—	£
<i>a.</i> Home mission, Lowlands	148,004
<i>b.</i> " Highlands	71,710
2. Colonial mission fund	122,876
3. Continental "	39,544
4. Foreign "	470,846
5. Jewish "	129,955

All these funds, with one exception, are raised by annual collections, on days fixed every year by the appointment of the assembly, and made all over the church. The exception is that of the fund for foreign missions. Because its wants are greater than those of any of the others, the assembly, in its particular case, has sanctioned and recommended the employment of congregational associations, after the manner of the sustentation and education funds. This plan, however, is not universally adopted, and in a good many congregations the contribution is made, as in the case of the other mission funds, by an annual congregational collection at the church door.

Table No. III in the Appendix exhibits the amounts which have been contributed to these funds respectively since the year 1843. From that table it will be seen that the grand total raised for these missions in the course of the twenty-six years which have elapsed since the disruption amounts to 982,935*l.* 5*s.* 10½*d.*

There is still another table, which is marked No. IV in the Appendix, to which I have to call the attention of the Statistical Society. It presents a general abstract of the whole funds raised by the Free Church for all purposes connected with her work during the twenty-six years from the disruption to 1868-69 inclusive. The aggregate of all the funds collected during that period and devoted to the purposes of religion and education by the Free Church is 8,487,773*l.* 14*s.* —¾*d.*

To the above-named aggregate there fall to be added various sums which have not passed through the public accounts of the church. These sums have been separately stated under the various branches of expenditure alluded to in the foregoing statement, viz.:—

	£
For local expenditure on church buildings	100,000
" maintenance of schools	170,000
For building, endowment, and bursary funds of Aberdeen and Glasgow	80,625
Total	350,625

which, being added to the aggregate, brings up the total sum raised to 8,838,398*l.*

Leaving aside the amount collected on the first of those years, which was in many ways exceptional, and dividing the remaining years into periods of five years each, the progressive character of the funds raised will at once appear.

The totals so arranged are as follows :—

	£	s.	d.
Five years, from 1844 to 1848 inclusive	1,495,264	15	7
" '49 " '53 "	1,446,309	6	11½
" '54 " '58 "	1,577,786	13	6½
" '59 " '63 "	1,674,954	9	7½
" '64 " '69 "	1,929,586	11	10½

Or, to put the case another way, if the average of the whole twenty-six years be taken, including the first and thoroughly exceptional year, the result is 326,452*l.* 16*s.* 1½*d.*, whereas the sum collected during the last of the twenty-six years is 421,796*l.* 4*s.* 9½*d.* Thus showing that the revenue of last year exceeds the average of the whole period by the sum of 95,343*l.* 8*s.* 8*d.*

Before concluding this account of the finance of the Free Church, it may be useful to notice certain matters connected with it which, though they could not well be woven into the narrative, do yet require to have a place assigned them. These are, first, the expense of management; second, the means employed to certify the congregations that their contributions have been duly received and applied; and lastly, the growth and distribution of the church as regards the urban and rural districts of the country.

1. The expenses of management.

The rule of the Church is, that all its committees which have funds under their charge should each defray its expenses out of its own funds. But as there are committees which have no funds, and which yet have work to do involving expense, and as there is also considerable expense incurred in connection with the meetings and business of the assembly itself, the committees that have funds are charged with a proportional share of these general expenses of the church in addition to the expenses which they have themselves incurred in connection with their own special departments.

The following is a statement, in this twofold sense, of what it costs the Free Church to raise and administer her revenues, and to conduct the business of her supreme court—

	£	s.	d.
General treasurer's office and assembly expenses	2,386	5	9
Management expenses of the separate committees	3,412	10	5
	5,798	16	2

Table No. V in the Appendix will exhibit the details of this subject. From that table it will be seen that the expense charged against the sustentation fund for its ingathering, management, and distribution, even including its share of the general expenses of the assembly, is comparatively small, amounting only to 2,088*l.*, or very little more than one and a half per cent. of its ordinary revenue. The lightness of this charge arises from the fact that all the immense service in promoting the interests of the sustentation fund which is rendered by the deacons' courts, collectors, and treasurers of all the church's congregations, is rendered gratuitously. And the same remark applies to all the other funds of the church which are raised by the same or similar agencies.

2. The means employed to certify the congregations of the church that their contributions have been all duly received and applied.

For this purpose a publication called the "Free Church Monthly Record" is issued every month, and circulated through the congregations to the extent of between thirty and forty thousand copies. Of this periodical a special copy is sent to every minister. In this "Record," in addition to the most recent intelligence regarding the several departments of the church's affairs, there is contained a complete and carefully tabulated statement of the whole "contributions received by the treasurer of the church" during the immediately preceding month. In this statement, as the congregations are all arranged in the order of their presbyteries, all can see at a glance, not only that their own contributions are duly acknowledged, but also how their rates of contribution stand in comparison with those of other congregations similar to their own. In this way, not only is the whole church periodically informed of the state of its financial affairs, but the wholesome influence of publicity, and consequently of public opinion, is brought to bear on each individual congregation, to keep it from neglecting its duty.

Besides these monthly financial reports, a complete statement of all the public accounts of the church is published by the assembly every year. In this statement not only are the whole of the sums collected by each of the congregations for the various funds of the church carefully entered, but also a debtor and creditor account of each of these funds, exactly as it was presented to the assembly by the committee having charge of it. Copies of this statement are sent every year to all the presbyteries, ministers, and deacons' courts, along with the acts of the assembly. The statement is also published in the number of the "Monthly Record" first issued after each assembly. In these different ways the utmost pains is taken to bring and keep all the money transactions of the church con-

tinually under the eye of all her office-bearers and people. It is probably due mainly to this cause that the most entire and unbroken confidence, in the integrity of the church's management of her funds, reigns throughout the whole body of her congregations. During the twenty-three years of my presidency of the sustentation fund committee, I have never heard even a suspicion of malversation expressed with respect to any one of the almost countless pecuniary remittances that are continually passing to and fro in connection with its affairs.

3. The growth and distribution of the church, as regards the urban and rural districts of the country respectively.

Over the growth of the church it is the special function of the home mission committees to watch, one of these committees being charged with this work in the Highlands and the other in the Lowlands. The funds of these committees are employed in stimulating, aiding, and fostering local efforts on behalf of church extension, wherever such efforts appear to be called for. For a number of years all new charges, so soon as they were formally sanctioned by the general assembly, were at once admitted to all the benefits of the central sustentation fund. This method of proceeding, however, was found to be attended with some serious disadvantages. It tended to multiply charges prematurely by the facilities it afforded to the local parties, of getting them set up without taking upon themselves a due share of the responsibility of providing for their permanent support. To check this evil it was at length decided by the Assembly that, thenceforth, all new charges should be required to pass through a certain period of probation before being placed on the platform of the equal dividend. During this probationary stage of their career these new charges are not allowed to receive, from the sustentation fund, more than they themselves contribute to it. Although to this sum grants in aid are made from the home mission and certain other subsidiary funds,—the total amount so received, including these grants, is in most cases less than the equal dividend. The congregation of the new charge is, in these circumstances, impelled to do its utmost in the way of increasing its own contributions, so as to make a better provision for its minister. Under this arrangement habits of self-reliance are cultivated, the liberality of the congregation is developed, and a greater security is thus obtained, that, when the congregation is transferred from the church-extension platform to that of the equal dividend, it will not press unduly on the equal dividend fund.

The number of church-extension charges existing at the date of the general assembly of 1869, as has been mentioned in a previous part of this paper, amounted to 82. The following table will show

what the ministers of these charges received for their support from all the sources above indicated :—

Ministers who received less than 100 <i>l.</i> a-year	10
" above 100 <i>l.</i> and less than 150 <i>l.</i>	31
" " 150 <i>l.</i> " 200 <i>l.</i>	18
" " 200 <i>l.</i> " 300 <i>l.</i>	11
" " 300 <i>l.</i> " 500 <i>l.</i>	11
" " 500 <i>l.</i>	1
	<hr/>
	82
	<hr/>

Of the ten ministers referred to in the above table as receiving less than 100*l.*, six received 94*l.* each and upwards, two received from 80*l.* to 90., and the remaining two received from 70*l.* to 80*l.* In reference to the ministers of church-extension charges it may be necessary to make this further explanation, that no contribution is made, from the home mission or other subsidiary aid fund, to any of these ministers whose congregations contribute to the sustentation fund 150*l.* or more per annum. The ministers of all such church-extension charges are placed at once on the platform of the equal dividend. Of those charges, on the other hand, which, owing to their greater poverty, continue to be aid-receiving, six are annually advanced to the platform of the equal dividend—and, generally, according to their seniority.

As regards the actual growth of the church as a whole, Table No. I of the Appendix shows that, at the end of the first year after the disruption of 1843, the number of ministers who participated in the fund during that year was 583; and that at the end of the twenty-sixth year, that is, at the date of the General Assembly of 1869, the number of ministers participating in the course of that year was 942.* The increase in the number of congregations has not been quite in the same proportion; and for this reason, that the number of congregations who left the Establishment in 1843 was very considerably greater than the number of ministers who did so. In many parishes, while the ministers adhered to the Establishment, the congregations withdrew from it. On this account a great part of the home mission work of the church, in its earlier years, consisted in organizing such congregations, and in providing them with ministers. At the date of the assembly of 1849 the number of congregations which had been sanctioned by the church as regular charges was 750; although, at the period above named, 64 of these charges were still unsupplied with

* These numbers include those who, from death or induction in the course of the year, drew only a portion of the year's income.

ministers. During the twenty years that have since elapsed the number of sanctioned charges has risen to 876,* and every one of these charges has now a minister placed over it.

With respect to the distribution of the church over town and country, the following brief statement will explain how this matter stands. The largest and most populous towns of Scotland are—

	Ministers.
Edinburgh (including Leith), in which the Free Church has	45
Glasgow, in which it has	57
Aberdeen " 	19
Dundee " 	16
Total	137

The remaining ministers, amounting in number to nearly 800, are placed in the smaller towns, villages, and rural districts. To show that the charges of this great body of the ministry of the Free Church are spread pretty equally over the whole country, the following facts may suffice.

The church is divided into 71 presbyteries, and these presbyteries are combined into 14 provincial synods. Five of those synods stretch over very nearly the whole of the Highlands, extending as they do from the Mull of Kintyre, at the southern extremity of Argyllshire, to the shore of the Pentland Frith. It is well known that this large section of the country is but thinly peopled. The five synods within which it is all but entirely embraced are those of—

	Ministers.
Argyll, in which the Free Church has.....	45
Moray	55
Boss	25
Sutherland and Caithness	34
Glenelg.....	36
Total	195

If to the synods now named there be added those parts of two other synods—those, viz., of Perth and Stirling and of Aberdeen—which belong to the Highlands, the number of ministers of the Free Church whose charges are situated to the north of the Grampians may be safely stated as amounting to about 240. And besides, the Free Church has 15 ministers in the Orkney and 10 in the Shetland Isles.

* Excepting from 15 to 20 charges which may be at present vacant by death of the ministers or removal.

The Lowland synods, and the number of their ministers respectively, are as follows :—

	Ministers.
Lothian and Tweeddale	104
Merse and Teviotdale	38
Dumfries	34
Galloway	24
Glasgow and Ayr	190
Fife	55
Angus and Mearns.....	81
Perth and Stirling	75
Aberdeen	99
Total	<u>700</u>

If from this total there be subtracted those ministers belonging to the synod of Aberdeen, and of that of Perth and Stirling whose charges lie north of the Grampians, it will be seen that the number of ministers of the Free Church whose charges belong to the Lowlands,—that is to say, to the district of country extending from the Grampians to the English border,—is about 655.

Such are the leading facts connected with the origin, objects, methods, and results of the financial system of the Free Church of Scotland. It has enabled her not only to provide the whole material equipment of a Christian church, such as colleges and schools, residences for her clergy and places of worship for her people, but to maintain all over the country a stated and educated ministry, in some measure of comfort, and in a position, as regards their means of support, not too immediately or entirely dependent on those among whom they are called to discharge their sacred duties. It has enabled her to do these things in a country and among a section of its population possessing but a moderate amount of wealth, and for a length of time which has been at least sufficiently prolonged to prove that her financial system has a capability of endurance which has amply justified its adoption, and vindicated the sagacity of its distinguished founder.

APPENDIX.

TABLE I.—*Showing Annual Income of Sustentation Fund, Amount of Equal Dividend, and the Number of Ministers who Received a Full Equal Dividend each Year from 1843 till 1869.*

Year.	Income of Sustentation Fund.	Ministers Receiving a Full Equal Dividend.	Total of Ministers on Fund.*	Equal Dividend.
	£	£		£
1843-44.....	61,513	470	583	105
'44-45.....	76,180	557	627	122
'45-46.....	80,290	580	657	122
'46-47.....	82,166	590	673	120
'47-48.....	84,051	596	684	128
'48-49.....	87,519	623	694	122
'49-50.....	89,649	647	706	123
1850-51.....	92,074	668	728	123
'51-52.....	91,469	675	724	122
'52-53.....	90,661	691	726	121
'53-54.....	97,352	696	747	119
'54-55.....	100,408	700	771	132
'55-56.....	107,714	712	779	140
'56-57.....	110,006	700	791	138
'57-58.....	110,254	703	803	138
'58-59.....	110,435	713	812	138
'59-60.....	109,173	723	831	135
1860-61.....	113,463	730	844	138
'61-62.....	112,887	724	872	137
'62-63.....	114,789	722	885	137
'63-64.....	117,590	715	894	138
'64-65.....	118,452	710	908	144
'65-66.....	122,592	741	902	143
'66-67.....	124,317	731	917	144
'67-68.....	133,050	728	928	150
'68-69.....	137,216	740	942	150

* This column includes all ministers who have received stipends for any portion of the year, and therefore shows a little excess in the total of ministers each year, as it includes both ministers who have died, and successors who have been inducted during the same year.

To save space, the amounts in this and the subsequent tables have been given to the nearest £.

TABLE II.—*Building Funds.*

Year.	General.	Local.	Total.
	£	£	£
1843-44	85,238	142,599	227,837
'44-45	34,206	97,532	131,738
'45-46	23,774	66,066	89,840
'46-47	38,920	46,447	85,367
'47-48	23,269	34,566	57,835
'48-49	22,011	43,981	65,992
'49-50	24,708	52,609	77,317
1850-51	18,003	51,948	69,950
'51-52	5,000	37,510	42,510
'52-53	5,215	37,109	42,315
'53-54	3,402	37,375	40,777
'54-55	2,986	33,689	36,675
'55-56	5,391	30,200	35,591
'56-57	6,786	43,438	50,219
'57-58	15,961	46,897	62,858
'58-59	9,341	41,179	50,520
'59-60	6,716	35,855	42,572
1860-61	6,011	36,539	42,551
'61-62	3,829	38,518	42,347
'62-63	4,098	43,893	52,991
'63-64	982	40,314	50,296
'64-65	2,247	41,822	44,069
'65-66	150	55,038	55,188
'66-67	1,771	46,964	48,735
'67-68	3,037	56,279	59,316
'68-69	2,400	59,919	62,319
Totals	355,452	1,812,272	1,667,725

TABLE III.—*General Abstract of Missionary Schemes, showing the Whole Sums Raised Yearly during the Twenty-Six Years from the Disruption to 1868-69 inclusive, for Missions at Home and Abroad.*

Year.	Home.		Colonies.	Continent of Europe.	Foreign.	Jews.	Total.
	Lowlands.	Highlands.					
	£	£	£	£	£	£	£
1843-44	2,987	2,260	3,169	—	13,433	4,549	26,848
'44-45	4,693	55	8,391	1,842	19,011	6,312	40,303
'45-46	5,288	—	8,938	3,918	12,852	6,511	37,508
'46-47	5,184	15,769	9,340	2,484	13,817	6,598	53,192
'47-48	6,176	90	4,146	2,656	21,955	5,080	40,103
'48-49	5,243	74	4,078	3,353	12,767	1,275	26,790
1849-50	406	5,189	3,790	373	14,130	4,505	28,293
'50-51	4,970	1,124	4,901	320	17,264	5,672	34,250
'51-52	4,493	3,833	4,124	24	14,194	4,436	31,105
'52-53	7,507	331	8,103	14	17,710	4,932	38,596
'53-54	4,001	4,067	4,348	2,195	12,010	8,597	35,219
1854-55	6,535	218	5,942	336	25,440	4,855	43,327
'55-56	2,050	3,618	4,150	1,919	19,821	4,461	36,018
'56-57	7,234	667	4,104	425	15,916	4,598	32,945
'57-58	6,408	4,555	5,137	1,611	18,980	2,546	39,336
'58-59	2,540	1,314	4,488	2,457	19,210	7,674	37,682
1859-60	8,018	4,257	4,421	225	16,509	4,203	37,632
'60-61	6,845	768	3,913	3,060	20,218	4,581	39,385
'61-62	8,251	4,069	4,327	508	18,868	4,644	40,667
'62-63	5,702	622	3,668	2,494	14,034	3,962	30,482
'63-64	7,796	4,094	3,227	311	18,107	4,232	37,769
1864-65	6,917	3,196	2,988	2,442	27,318	4,809	47,620
'65-66	7,939	4,499	3,449	205	19,871	4,519	40,482
'66-67	6,019	1,400	3,145	2,879	18,976	4,397	36,816
'67-68	8,517	4,187	3,172	427	19,941	5,184	41,426
'68-69	6,235	1,455	3,017	3,066	28,494	6,823	49,141
Totals	148,004	71,711	122,876	39,544	470,846	129,955	982,935

TABLE IV.—General Abstract, showing the Aggregate Amount of Funds Raised for all Purposes during the Twenty-Six Years from the Disruption to 1868-69 inclusive.

Year.	Building Funds.		Sustentation, Sup- plementary for Aged and Infirm Ministers.	Con- gregational.	Educa- tion.	Colleges.	Missions.	General Trustees and Miscella- neous.	Total.
	General.	Local.							
£	£	£	£	£	£	£	£	£	£
1843-44	85,238	142,598	61,513	41,540	3,722	1,221	26,848	1,190	363,872
1844-45	34,206	97,532	76,180	69,986	4,008	9,221	40,308	2,173	333,604
'45-46	23,774	66,066	80,291	70,675	9,655	7,201	37,508	1,090	296,259
'46-47	38,920	45,446	82,166	78,227	10,142	8,472	53,192	27	317,593
'47-48	23,269	34,566	89,051	71,850	10,317	6,154	40,103	35	275,348
'48-49	22,011	43,981	88,328	71,379	11,020	8,950	26,790	1	272,461
1849-50	24,708	52,609	90,973	77,590	11,197	5,608	28,293	15,362	306,340
'50-51	18,008	51,948	96,847	74,472	13,007	15,000	34,250	55	303,581
'51-52	5,000	37,510	93,426	80,334	15,016	6,078	31,105	712	269,182
'52-53	5,215	37,100	98,066	79,716	13,136	10,389	38,596	318	277,536
'53-54	3,402	37,375	109,253	83,505	12,672	6,823	35,219	1,422	289,670
1854-55	2,986	33,689	107,347	85,871	13,888	9,607	43,327	9,761	306,476
'55-56	5,391	30,200	111,319	86,750	13,111	5,671	36,018	110	288,569
'56-57	6,786	43,433	115,708	87,871	14,133	7,084	32,945	265	308,225
'57-58	15,961	46,897	114,412	92,557	16,674	5,852	39,336	105	331,794
'58-59	9,341	41,180	126,283	94,462	17,765	9,000	37,682	6,992	392,724
1859-60	6,716	35,856	111,682	97,363	16,557	6,303	37,632	7,709	319,818
'60-61	6,011	36,539	118,692	100,134	16,723	7,232	39,385	6,274	330,992
'61-62	3,829	38,518	115,816	105,342	15,481	13,685	40,667	4,149	337,437
'62-63	4,098	48,893	118,207	111,764	16,275	7,209	30,482	6,153	343,081
'63-64	982	49,314	121,760	107,397	15,801	6,938	37,769	2,671	343,626
1864-65	2,247	41,822	123,052	113,364	19,309	6,094	47,620	5,502	359,010
'65-66	150	55,038	135,427	118,792	19,665	10,661	40,482	3,674	383,890
'66-67	1,771	46,964	129,468	122,260	20,359	7,672	36,816	3,804	369,114
'67-68	3,087	56,279	139,237	126,428	19,123	6,499	41,426	3,747	395,776
'68-69	2,400	59,919	143,083	126,446	19,245	17,269	49,141	4,294	421,796
Totals	355,452	1,312,272	2,792,587	2,376,095	367,946	211,888	982,935	88,595	8,487,774

TABLE V.—*Showing the General and Special Expenses incurred in Conducting the Business of the Free Church during the Year from 15th March, 1868, to 15th March, 1869.*

	Assembly and General Expenses.	Committees' Expenses.	Total.
	£	£	£
1. Sustentation fund	852	1,236	2,088
2. Aged and infirm ministers' fund	133	—	133
3. Home mission	174	234	409
4. Highlands	116	149	265
5. Education	234	508	742
6. Colleges	106	30	135
7. Foreign missions	269	746	1,015
8. Colonial „	116	192	308
9. Jews' conversion	138	78	217
10. { Church building	52	55	107
{ Manse „	52	35	87
11. Continent	47	112	159
13. Pre-disruption ministers' fund....	63	37	100
14. Sundries	34	—	34
Totals	2,386	3,412	5,799

PROCEEDINGS OF THE STATISTICAL SOCIETY.

SESSION 1868-69.

First Ordinary Meeting, Tuesday, 17th November, 1868.

James Heywood, Esq., M.A., F.R.S., Vice-President, in the Chair.

The following Gentleman was elected a Fellow of the Society,
viz.:—

William Galt.

The following Paper was read:—

“On the Amount of the Metallic Currency of the United Kingdom, with reference to the question of International Coinage.”
By Professor Jevons.

Second Ordinary Meeting, Tuesday, 15th December, 1868.

Dr. Farr, F.R.S., Vice-President, in the Chair.

The following Gentlemen were elected Fellows of the Society,
viz.:—

William F. Purdy.

John Douglas Farrell.

William Charles Bryant.

John Harrison, jun.

Charles James Wallis.

Samuel Warren Burton.

William Robinson.

Frank Burford Treatt.

Charles Rivers Wilson.

The following Papers were read:—

“Statistical Notes regarding the Colony of Natal.” By Dr.
R. J. Mann.

“On Tea Cultivation in India.” By Mr. D. H. Fielder.

Third Ordinary Meeting, Tuesday, 19th January, 1869.

Colonel W. H. Sykes, M.P., F.R.S., Vice-President, in the Chair.

The following Gentlemen were elected Fellows of the Society,
viz.:—

George Dornbusch.

William Hancock.

Ernest Seyd.

Mr. Josiah Boothby, of South Australia, was elected a
Corresponding Member.

The following Paper was read:—

“On the Taxation of the United Kingdom.” By Mr. R.
Dudley Baxter, M.A.

Fourth Ordinary Meeting, Tuesday, 16th February, 1869.

Dr. Farr, F.R.S., Vice-President, in the Chair.

The following Paper was read:—

“On the Cost and Organisation of the Civil Service.” By
Mr Horace Mann.

Fifth Ordinary Meeting, Tuesday, 16th March, 1869.

William Newmarch, Esq., F.R.S., President, in the Chair.

The following Gentlemen were elected Fellows of the Society,
viz.:—

Henry A. Isaacs.	Philip Sayle, jun.
R. H. Patterson.	Alfred K. Dyer.
Charles Morgan Norwood, M.P.	

The following Paper was read:—

“On the Agricultural Statistics of the United Kingdom.” By
Mr. James Caird.

Sixth Ordinary Meeting, Tuesday, 20th April, 1869.

William Newmarch, Esq., F.R.S., President, in the Chair.

The following Gentlemen were elected Fellows of the Society,
viz.:—

John Shaw.	William Frederic De La Rue.
Charles Lamport.	James Macalester Hall.
John Passmore Edwards.	R. Anstruther Dalzell.

The following Paper was read:—

“On Insanity and Crime, and on the Plea of Insanity in
Criminal Cases.” By Dr. Guy, F.R.S.

Seventh Ordinary Meeting, Tuesday, 18th May, 1869.

William Newmarch, Esq., F.R.S., President, in the Chair.

The following Gentlemen were elected Fellows of the Society,
viz.:—

John Kyshe	William Thos. Newmarch.
John Cleghorn.	Joseph Hickson.
William Edmonds.	

The following Paper was read:—

“On the Statistics of the Netherlands.” By Mr. Samuel Brown.

Eighth Ordinary Meeting, Tuesday, 15th June, 1869.

William Newmarch, Esq., F.R.S., President, in the Chair.

The following Gentlemen were elected Fellows of the Society,
viz.:—

Henry Davies Pochin.	Thomas Dyke Acland, M.P.
William Neilson Hancock, LL.D.	Francis Gustavus Paulus Neison, jun.
Henry Beverley.	John Ancram Lawson.
Peter Imrie.	

The following Paper was read:—

“On the Statistics of the English Census.” By Mr. T. A.
Welton.

RECOMMENDATIONS of the COUNCIL of the STATISTICAL SOCIETY with
respect to the CENSUS of 1871.

THE minute printed below has been adopted by the Council, and a copy of it forwarded to the Secretary of State for the Home Department:—

“1. That it is not desirable to suggest any arrangements of detail in the mode of collecting the information differing from those which have been observed generally with great success in the taking of the census on the last two occasions.”

“2. That it is advisable that the census of 1871 should be taken at the same time of the year as the last census.”

“3. Two collateral branches of inquiry were prosecuted in 1851 by means of the census machinery, but not under the compulsory powers of the statute.”

These related to—

a. The provision existing for religious worship, and the attendance thereon.

b. The means existing for education, and the attendance at schools and places of instruction.

The Council, in 1860, were of opinion that both these collateral subjects should be inquired into at the census of 1861, and made their recommendation accordingly in April, 1860. This recommendation was not adopted by the Government of the day.

The Council having again considered this part of the inquiry, and having regard to the lapse of time since the investigation of 1851, think it expedient that the same subjects should in like manner be inquired into at the census of 1871.

“4. They also are of opinion that the statute to be passed on the present occasion should further contain an express enactment requiring that a distinct question should be inserted in every census schedule as to the religious persuasion of the persons included in that schedule.”

“5. That the statute should also require that the person filling up the schedule should state whether every individual mentioned therein above the age of seven years can read or write.”

“6. That inquiries to show the state of the house accommodation of the people on the basis adopted with so much success in the last census of Scotland, should be embodied in the next census returns for England.”

BRITISH ASSOCIATION, 1869.

THIRTY-NINTH Meeting of the BRITISH ASSOCIATION for the
Advancement of Science, held at EXETER, 18th—25th August,
1869.

Section F.—Economic Science and Statistics.

President.—The Right Hon. Sir Stafford H. Northcote, Bart., C.B., M.P.

Vice-Presidents.—T. D. Acland, M.A., D.C.L., M.P.; Lord Stanley, F.R.S., M.P.; Lord Houghton, D.C.L., F.R.S.; Sir W. Tite, F.R.S., M.P.; Dr. Wm. Farr, D.C.L., F.R.S.; Professor J. E. Thorold Rogers, M.A.

Secretaries.—Edmund Macrory, M.A.; Frederick Purdy, F.S.S.; Charles T. D. Acland, M.A.

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The following Papers were read in the Section :—

Thursday, 19th August.

The President's Address.

Canon Girdlestone.—Maintenance of Schools in Rural Districts.

J. Bailey Denton.—Technical Education of the Agricultural Labourer.

James Hunt Holley.—Remarks on the need of Science for the development of Agriculture.

Dr. L. Lindsay.—The Sutherland Gold Diggings, as a scientific and social experiment.

John Glover, F.S.S.—Decline of Ship Building on the Thames.

Friday, 20th August.

The Report of the Committee on Uniformity of Weights and Coins in the interest of Science.

Dr. Farr, F.R.S., F.S.S.—On International Coinage.

W. H. U. Sankey.—On Weights and Measures.

Professor Leone Levi, F.S.S.—On the Economic Condition of the Agricultural Labourer in England.

Professor Leone Levi, F.S.S.—On Agricultural Economics and Wages.

Frederick Purdy, F.S.S.—Statistical Notes on Mr. J. B. Lawes' Agricultural Experiments.

Saturday, 21st August.

James Heywood, M.A., F.R.S., F.S.S.—On the Examination Subjects for admission into the College for Women at Hitchin.

Rev. W. Tuckwell, M.A.—On the Method of Teaching Physical Science.

Jesse Collings.—Statistics of the National Educational League.

Raphael Brandon.—Some Statistics of Railway in their relation to the Public.

James Stark, M.D.—Contributions to Vital Statistics.

P. M. Tait, F.S.S.—Vital Statistics of Bombay.

Robert Mann.—On Naval Finance.

Hyde Clarke, F.S.S.—On the Want of Statistics on the Question of Mixed Races.

Hyde Clarke, F.S.S.—On the Rapidity of Human Thought.

Hyde Clarke, F.S.S.—On the Distinction between Rent and Land Tax in India.

Monday, 23rd August.

Frederick Purdy, F.S.S.—On the Pressure of Taxation on Real Property.

Dr. W. Neilson Hancock, F.S.S.—On Local Taxation in Ireland.

W. Botley.—On the Condition of the Agricultural Labourer.

Tuesday, 24th August.

Dr. Robert Mann.—On Assisted Emigration.

Archibald Hamilton, F.S.S.—The Economic Progress of New Zealand.

James Heywood, F.R.S., F.S.S.—On Municipal Government for Canadian Indian Reserves.

Sir J. Bowring.—On Prison Laws as associated with Prison Discipline.

F. P. Fellows, F.S.S.—On our National Accounts.

Sir J. Bowring.—The Devonshire Association for Advancement of Science and Art.

Wednesday, 25th August.

Henry Dircks, C.E., LL.D.—Statistics of Invention, illustrating the Policy of a Patent Law.

MISCELLANEA.

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I.—*General Results of the Commercial and Financial History of 1869.*

FROM the *Economist*. This is the seventh of the series which has appeared in that paper. See *Journal*, vol. xxxii, pp. 78—102:—

“The recovery of trade visible in a small degree at the close of 1868 has made decided progress in 1869, and towards the close of the year there was in the iron, hardware, woollen, worsted, and hosiery trades, and in some others of less magnitude, considerable activity.

“Foreign Politics have occasioned little anxiety. The close of the general elections in France early in June showed a large accession of numbers and ability to the Opposition, and in the course of July and August it became certain that the Emperor was prepared to adopt extensive and real measures of parliamentary administration. These measures culminated in December in the formation of the cabinet of M. Emile Ollivier, and the reappearance in France, for the first time in a quarter of a century, of a Constitutional Government resting on the solid support of the great body of the people. It is expected, and with reason, that by such a government large economies will be carried out in the enormous military expenditure of France. In Prussia and Austria there has been further growth of the constitutional tendencies of former years—and ardent expressions in the legislatures of both countries for peace and reduced taxation. Italy still remains unsettled and unsatisfied—with cabinets ever changing, and a parliament which consumes itself in mere debates. Spain is beyond the comprehension of the rest of Europe. It is a monarchy without a monarch, and a republic without a chief; but this interim system seems to answer most of the needs of the country, and is not likely to be soon changed.

“General Grant assumed official charge of the Presidency of the

United States in March (1869), and the new House of Representatives which then met has certainly been better in tone and character than the preceding one. One of its first acts was to declare the inviolability of the public obligations, and to discountenance attempts made in the direction of repudiation. The 'Alabama' controversy has been allowed to remain in official abeyance during the year, with the exception of one or two despatches from Mr. Fish, the American Secretary of State. Mr. Sumner delivered a vehement and extreme speech in the Senate early in the year, setting forth preposterous claims on England; but in this country and in his own he entirely failed in producing the effects he expected.

"The war in South America against Lopez has been prolonged in a sense throughout the year by the extraordinary resources of the fugitive tyrant—for it is now clearly ascertained that he was perhaps as cruel and savage an oppressor as ever lived. The main army of the Allies is now dispersed, and only a flying field force left to protect the new Paraguayan Government installed in Ascuncion.

"The changes of the year have been all in favour of a more settled aspect of politics over the world. In Europe the strength and temper of the representative institutions has put an end to the merely *personal* element, so long a source of danger.

"As regards the harvest of 1869 in Great Britain, Messrs. Carr and Co. quoted *passim* say—'In the early part of May wheat promised a yield in every respect equal to that of 1868, but from that time the weather changed, became cold and wintry, with some slight frost at night, and continued so till about the 27th June, when we had the first appearance of summer. Hardly can be remembered such a cold June. From the beginning of July the weather was all that could be desired. * * * * On the whole the wheat crop is considered to be 10 to 15 per cent. *below* an average, and 25 to 30 per cent. under the crop of 1868.' The following Table (I) gives the prices after harvest, &c. :—

(I).—*Gazette Average Prices of Wheat (per Imperial Quarter) in United Kingdom, immediately after the Harvest, 1863-69, and Total Average of each Calendar Year.*

After Harvest.			Total Average.		
		<i>s. d.</i>			<i>s. d.</i>
1869.	26th October	46 2	1869.	Whole Year	48 2
'68.	"	53 4	'68.	"	63 9
'67.	"	70 8	'67.	"	64 6
'66.	"	52 6	'66.	"	49 11
'65.	"	42 4	'65.	"	41 10
'64.	"	38 6	'64.	"	40 2
'63.	"	40 -	'63.	"	44 9

"The price in October, 1869, as compared with October, 1868, is 12 per cent. *lower*, and before the end of 1869 the price had

fallen to 43s.—a figure not very much above the low prices of 1863-64-65.

“The Grain Trade of 1869 has afforded a striking example of the benefit of Free Trade principles to the consumer. Our own crop of 1869, as we have seen, was seriously deficient; but we have been profusely supplied by all the rest of the world—especially by the United States. ‘From New York,’ we quote *Bell’s Weekly Messenger* referred to *passim*, ‘the shipments in 1869 have been on an unprecedentedly heavy scale, the experience gained in 1867-68 having taught the Western farmers the necessity of forwarding their produce to market without delay. * * * * The rapid means of communication afforded by the extension of the telegraphic system, and the speedy and cheap means of transit offered by railroads in all parts of the world, have contributed to hasten forward supplies of grain to Europe; and these influences will become more and more important. From a consumer’s point of view, this is no doubt very encouraging, but the position of the wheat grower is decidedly unfavourable. We feel justified in pronouncing 1869 an unfavourable year to the English farmer.’

“We concur in the opinion here expressed regarding the English farmer. He has had a short home crop and large foreign importations, producing low prices. But the moral is now thoroughly understood. The English farmer and his landlord must adapt themselves to face the competition of the rest of the world. They must reconsider rents, modes of culture, game restrictions, terms of letting, duration of leases, and agricultural customs, and they must apply such resources of capital and skill in their business as will obtain the most suitable produce out of the land. They have close at hand an unlimited demand for cattle, roots, and vegetables, and if need be they must leave wheat-growing to the most favoured localities. The real interest of the consumer in this, as in all cases, is that of the producer.

“In the mean time we have to note the losses of many in the farming interest at home as an unfavourable incident of 1869.

“The general course of wholesale prices in 1869 has not differed largely from that of the preceding year. The tendency has been towards higher rates in several important cases—iron for example.

“The next Table (II) exhibits the percentage results in the usual form:—

(II).—*Wholesale Prices in London. Comparison of 1st January, 1870, with Three Former Dates, stating in Percentages the Degree in which the Prices of 1st January, 1870, were Higher or Lower than the Prices prevailing at the Three Selected Earlier Dates.*

Articles.	Higher	Lower	Higher	Lower	Higher	Lower	Higher	Lower
	Than 1st January, 1869.		Than 1st January, 1867.		Than 1st January, 1864.		Than 1st July, 1857.	
	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
Coffee	5	—	—	10	—	12	—	12
Sugar	12	—	24	—	—	5	—	35
Tea	—	3	—	—	—	—	—	—
Wheat	—	17	—	33	6	—	—	35
Butchers' meat	5	—	1	—	5	—	15	—
Indigo	1	—	3	—	20	—	28	—
Oils	—	1	—	10	—	3	—	10
Timber	2	—	5	—	—	3	—	4
Tallow	—	5	—	1	12	—	—	35
Leather	—	6	—	—	—	4	—	24
Copper	—	7	—	14	—	30	—	35
Iron	5	—	—	—	—	15	—	27
Lead	—	—	—	4	—	10	—	24
Tin	10	—	40	—	4	—	—	17
Cotton	4	—	—	20	—	30	50	—
Flax and hemp	—	6	—	—	—	15	—	4
Silk	—	4	—	5	25	—	—	15
Wool	—	8	—	35	—	60	—	50
Tobacco	—	—	—	16	—	50	—	20
Cotton cloth	4	—	—	30	—	55	25	—
Total Bank Note circulation of Great Britain	1	—	1	—	8	—	9	—

Note.—This table is deduced from the percentages given in Appendix (C), and may be read thus:—On 1st January, 1870, coffee was 5 per cent. *higher* than on 1st January, 1869; 10 per cent. *lower* than on 1st January, 1867; 12 per cent. *lower* than on 1st January, 1864; and 12 per cent. *lower* than on 1st July, 1857.

“ If the variation of prices, as shown above, be trifling as between 1st January, 1870, and 1st January, 1869, the *fall* is considerable when 1st January, 1870, is compared with three years ago (1st January, 1867), still more considerable when compared with six years ago (1st January, 1864), and in the highest degree remarkable when compared with the rates current thirteen years ago (1st July, 1857). Measured against that particular date, the decline of present prices may be said to be about one-third (33 per cent.). Sugar, timber, copper, iron, lead, wool, tobacco, leather—taken as a group—are fully one-third cheaper at present than at the close of 1856.

“Wages during 1869 remained depressed till quite the close of the year. In the iron trades a rise of 5 per cent. was granted early in the summer, and a further rise of 10 per cent. (together 15 per cent.) in February, 1870. In some other trades also rates of wages slightly advanced (say) from 3 to 7 per cent.

“The controversy relative to the alleged depreciation of gold (that is, a general rise of prices), consequent on the Californian and Australian discoveries, still retains its interest—but not the urgent kind of interest of the earlier years of the influx. Professor Jevons has always been one of the best informed leaders of the party who contended for the certainty of the fact of a great depreciation of gold. In May last Mr. Jevons addressed to the *Economist* a carefully prepared paper, in which, by means of calculations, founded on the data of this annual review, he arrived at the conclusion that, as between 1849 and 1869 the rise of general prices is 18 per cent. We think this conclusion an extreme one. We cannot forget the long train of violently disturbing causes—wars, revolutions, cotton famines, Indian mutinies, and the like—which between 1841 and 1869 have hindered or destroyed production over immense countries, and have operated directly and powerfully to raise prices by limitations of mere supply. Professor Jevons, however, admits that the extreme views of alleged depreciation favoured by M. Chevalier, Mr. Cobden, and others, in 1853-54, are no longer tenable; and as we understand the following passage, he limits his modified opinions to the point—that the new gold has arrested the decline of general prices which had been in progress for some years prior to 1849, in consequence of the pressure of increasing population and transactions upon the then stationary annual supplies of the precious metals. We fully accept this latter doctrine. We believe that a large part of the mercantile and social phenomena of the (say) twenty or twenty-five years prior to 1849 are to be explained only by the progressive *appreciation* of gold, and the consequent progressive advantages possessed by creditors over debtors. In like manner the altered aspect of the period since 1849 is to be similarly explained by the cessation, and perhaps in a degree the reversal, of the tendency of the preceding twenty years. Mr. Jevons says:—

“Many eminent men, especially M. Chevalier, looked upon the depreciation of gold as a sudden and revolutionary event which would happen in the course of time, and yet I believe that when M. Chevalier was writing (1854) the most sudden and serious part of the effect had been already produced. Prices have never since stood so high as they did in 1854 and 1857, and though returning enterprise and expansion of credit will doubtless occasion another rise in the next few years, there seems to be no reason to suppose that we shall get beyond the point attained in 1857. I should, therefore, *not* venture to call in question the remark of your annual reviewer, that the tendency is now in an opposite direction—in that of appreciation rather than depreciation. It is quite possible that the causes which occasioned a great fall of prices before 1849 are now again beginning to make themselves felt. *All I contend for is the existence of some disturbances which, in the last twenty years*

(1849-69) has prevented the previous fall of prices from continuing.
* * * * The normal course of prices in the present progressive state of things is, I think, downwards; but for twenty years at least this normal course has been checked or even reversed, and why should we hesitate to attribute this abnormal effect to the contemporary and extraordinary discoveries of gold.'

"We accept the doctrine stated in the final sentence, namely, that in the present progressive condition of invention, discovery, and enterprise, the natural tendency of prices is towards decline, by reason of the enlarging facilities and power of production. The object of all scientific methods applied to commerce and the arts is *Cheapness*. The ultimate aim of the projector or contriver is to get command of an article at such a price as will secure the steady custom of the million; for he perfectly understands that certainty and stability of markets is in the exact ratio of their extent and the cheapness of the articles supplied. It seems to be very probable that we are entering upon a period of some three, four, or more years, during which we shall see the effects in increased cheapness of a large group of commodities, especially in those supplied by the more remote and comparatively rude countries. The extension of telegraphs to all the principal ports and centres of the world is itself a powerful cause of production by the removal of delay and uncertainty. Railways in Russia, Turkey, Austria, South America, and the western regions of North America, have the same tendency, but in a more direct manner. Rapid improvements in the speed, size, and navigation of ships conduce to the same end. The introduction of improved and powerful tools and machines into hitherto rude countries are already producing striking results,—as, for example, steam ploughs and agricultural machinery in Hungary and Austria—steam apparatus in the preparation of cane sugar in the West Indies,—and the influx of science, skill, and capital into the Southern States of America, in replacement of the costly and imperfect methods of slave labour. But not only in the distant and backward countries are invention and enterprise at work. It was never so incessantly active as at present all over Europe. The depression of the last four years has driven all producers to ransack nature and science for new methods, all of *economical* tendency; and in the absence of some sudden catastrophe the world can scarcely fail to reap an early and substantial advantage.

"The annual production of gold from the new sources—that is, California, Australia, New Zealand, and British Columbia—remains at about 15 millions sterling, with a tendency to decline. It may safely be affirmed that the present enlarged commerce and population of the world could easily and advantageously absorb a much larger annual production from these or other newly-found sources; and it is one of the most conspicuous evidences of the profound changes of the last twenty years that the commercial portions of the world now require a total annual supply of 30 millions sterling of gold in place of the 14 millions, which was the average prior to 1849—and not only absorb the 30 millions, but look anxiously for the discovery of further deposits.

"We give in a note at foot the state of the Australian gold fields in 1868-69. The new colony of Queensland is beginning to afford gold exports.*

"In 1869 there has been no Abyssinian war to swell the exports of gold and silver to Egypt and Bombay, but the figures are nevertheless not very different, say 9 millions in 1869, against 10 millions in 1868.

"The following is the table:—

(III).—*Export of Gold and Silver to Egypt and East, per Peninsula and Oriental and French Steamers, 1861-69.*

[0,000's omitted, thus 2,62 = 2,620,000*l.*]

Year.	Gold.	Silver.	Totals.
	Min. £	Min. £	Min. £
1869	2,62	6,44	9,06
'68	6,52	3,56	10,08
'67	1,65	2,05	3,70
'66	2,87	7,07	9,95
1865	4,35	9,74	14,09
'64	6,97	16,96	23,92
'63	8,02	15,13	23,16
'62	3,40	14,60	18,00
'61	1,43	8,86	10,28
Totals, nine years	37,83	84,41	122,24
Average „	4,20	9,40	13,60

* "The *Times* Australian correspondent writes as follows:—

"The average number of gold miners employed in Victoria in 1868, was 63,181, being a *decrease* of 2,676 upon the corresponding average for 1867. The *average earnings* of each man last year were 104*l.* 18*s.* 8*d.*, as compared with 87*l.* 1*s.* 7*d.* in 1867. There are 2,651 ascertained quartz reefs, and 886,228 tons of quartz were crushed in 1868. The average yield of gold was something over half an ounce to the ton, while the cost of crushing ranged from 2*s.* 6*d.* to 1*l.* 10*s.* per ton. The extent of auriferous land opened up by gold miners in Victoria is 882 square miles, and the value of the machinery and mining plant employed was estimated last year at 2,150,432*l.*

"The total area of the land held as claims was 100,942 acres, of which nearly one-third was last year lying idle; the computed value of the whole of the claims was last year 8,869,504*l.* Twelve new gold fields were discovered last year, and 329 new companies, with a nominal capital of 3,719,198*l.*, were registered during 1868.

"The aggregate value of the gold exported from *Victoria* to the close of 1868 was 147,342,767*l.* The total quantity of gold exported from *Queensland* in the six months ending 3rd June, 1869, was 67,080 oz., or at the rate of 11,180 oz. per month. If the exports continue at the same rate for the remainder of the year they will amount in value to upwards of 500,000*l.* for the whole of 1869.

"The immense wealth of the Thames gold fields, in the northern island of *New Zealand*, has given a great stimulus to gold prospecting in other districts of that

"The peculiarity of the 1869 figures is the large increase in the *silver*, and the falling off in the *gold* shipments.

"During the ten years 1860-69, the total export of gold and silver (chiefly the latter) from Europe to *China* has amounted to about 20 millions sterling. But this sum represents only about half the influx of the precious metals into China, inasmuch as the import into that country from California is believed to be nearly as large as the import from Europe.

"The effect of the improved condition of India, the higher wages, and the cheaper modes of transit, has already extended the Indian markets for English goods, and so set in action a train of causes likely to diminish permanently the drain of gold and silver to the East.

"The cotton trade still remains the great difficulty of this country. During 1869 the condition of the Lancashire manufacturers was disastrous and deplorable. There was no margin of profit on finished goods, and at length, towards the end of summer, short time was largely adopted as the only means of redressing the inequality between the Liverpool and the Manchester markets. But this measure did not arrive till numerous failures had occurred. The process, indeed, was plain and powerful enough. The margin of profit was so small that none but mills of the most modern construction and filled with the newest machines, and in the hands of rich and expert men, could sustain the pressure of the times. The old and ill-adapted mills therefore in the hands of weak people were somewhat rapidly compelled to close, and not a few of the higher class mills changed hands at prices exceedingly favourable to the buyers. Cases were mentioned of mills being sold for six or seven thousand pounds, which had cost near forty. Beyond doubt the holders at this moment of a large proportion of the cotton-mill property of Lancashire have acquired it at very low prices; and whenever, therefore, the cotton trade revives these fortunate purchasers will enter into competition with the rest of the world with plant and machinery obtained at prices 30 or 40 per cent. below the average of former years.

"The following Table (IV) gives the general facts of 1869 and preceding years:—

colony. Thus, in Taranaki, Napier, and Wellington prospecting parties are at work, and substantial success is confidently anticipated. Although gold-bearing quartz has not been yet discovered in the province of *Canterbury*, the existence of extensive reefs on Banks's Peninsula has been clearly proved, and these will be shortly tested. Prospecting parties are out in the southern, western, and northern parts of the province, and a thorough exploration, at any rate, will be the result."

(IV).—*Cotton Trade, United Kingdom. Average Import Price and Annual Cost and Consumption.*

Year.	Average Imported Price per Pound.	Annual Value of Cotton Consumed.	Total Annual Consumption.
	d.	Min. £	Min. lbs.
1869.....	11 ¹ / ₈	44	940
'68.....	9 ¹ / ₈	41	996
'67.....	10 ¹ / ₈	41	954
1866.....	13 ¹ / ₈	52	891
'65.....	15 ¹ / ₈	47	718
'64.....	22	52	561
'63.....	20 ¹ / ₈	41	476
Average five years, 1856-60	6 ¹ / ₈	25	900

“ The increase in the average import price of raw cotton is 15 per cent. in 1869 over 1868; and this increase of price is explained by the following statement of the American cotton crops:—

(V).—*American Cotton Crops, 1866-67 to 1868-69.*

(In 1,000's of bales.)

Detail.	1869-70. Estimate.	1868-69.	1867-68.	1866-67.
Total crop.....	2,665	2,414	2,577	2,204
Exported to Great Britain	1,275	990	1,229	1,216
„ France.....	—	225	198	198
„ other places.....	—	233	230	130
Consumed in Northern States....	—	1,448	1,657	1,544
„ Southern „	—	839	819	723
	—	153	146	128
	—	2,440	2,622	2,404
Stock at end of season	—	11	37	82

Note.—The *pre-war* cotton crops and consumption in the States and export to Great Britain were as follows:—

(In 1,000's of bales.)

Years.	Growth.	Consumed in United States.	Exported to Great Britain.	Price in Liverpool.
1856-57	2,969	702	1,428	d. 7 ¹ / ₈
'57-58	3,113	469	1,809	6 ¹ / ₈
'58-59	3,851	771	2,049	6 ¹ / ₈
'59-60	4,675	810	2,669	6 ¹ / ₈
'60-61	3,656	669	2,175	7 ¹ / ₈

"The American crop of 1868-69 was only 2,414,000 bales—or a falling off of 163,000 bales compared with 1867-68. The estimated crop of 1869-70 is 2,665,000 bales—an increase doubtless, but still quite a third short of the pre-war crops of 1858-60, which admitted of an import price of 7*d.* per lb. It is very difficult to form opinions of the degree of rapidity with which the cotton cultivation will revive in the Southern States. The profits realised by the planters during the last two years have been large, and there is every inducement to extend this particular industry. If statements like the following can be believed, the return of crops of 3½ millions of bales may be looked for in 1871-72.

"Two distinct and very remarkable movements of population have been simultaneously going on in the Southern States of the American union during 1868-69, which, if continued, cannot fail to produce important political, social, and commercial consequences. A general, who has for some years held chief command in one of the Gulf States, has had his attention strongly attracted to these migrations, and has been engaged of late in collecting facts relating to them. According to this general's notes, as the substance of them is reported by the *New York Tribune*, it appears that the poor whites are leaving almost *en masse* the old Slave States stretching from the Atlantic to the Mississippi for the newer States on the Arkansas and Red Rivers, and for Texas. In such numbers are they going, that it seems as if South Carolina, Georgia, and Alabama would be entirely denuded of labouring whites. 'The general says that a short time ago he travelled through Eastern Alabama with a large body of white emigrants; and he has come to the conclusion, after careful observation, that not less than 20,000 whites have left Georgia and Alabama within the year for Arkansas and Texas.' The cause he assigns for this migration is the cheapness of land in the new settlements beyond the Mississippi. While the poorer class of whites are thus quitting the extreme South, their places are being immediately taken by the *emancipated negroes*. The general has observed that there is a very extensive movement of the coloured people to the 'black belt'—that belt of country stretching from the Sea Islands, in South Carolina, westward through Middle Georgia, Middle and Southern Alabama, Mississippi, and Louisiana. And he believes that if the blacks were sufficiently educated to write to their friends there would be an even still greater exodus of those people from the more northerly parts of the Southern States to what he designates as the 'black belt,' or the 'cotton belt.' Notwithstanding the number of negroes already gone southwards, so great is the demand for their labour in the Gulf States that labour agents in the principal cities in Virginia are offering to coloured men from 15 to 22½ dols. per month, and in many cases are adding offers of separate houses, gardens, rations, privilege to raise pigs, fowl, &c. The observations of this writer are curiously borne out by the report of the Department of Agriculture on the *cotton crop* of 1869, which has just been published. In Alabama the crop of the year 1868-69 was 8 per cent. more than the crop of 1867-68; in Florida it was 7 per cent. more; in Louisiana 12 per cent. more; in Missis-

issippi 15 per cent. more; and in Texas 25 per cent. more. While in the Carolinas, on the other hand, in Georgia and Tennessee, the crop of 1868-69 averaged 10 per cent. less than the crop of 1868. If this double migration continues, we may expect to see, therefore, a still greater increase of the cotton crop, as well as of the coloured population in the Gulf States, and a corresponding decrease of both in the country north of the 'black belt.' A compensating immigration towards this latter region from the old Free States is indeed not improbable, which may so increase the white class of small planters as to prevent any permanent falling off in the crop.'—*Pall Mall Gazette*.

"The estimates of total cotton supply for 1870 are only a little better than the actual facts of 1869, as will be seen from the following Table (VI). The probable supply is equal to 55,000 bales per week, against 50,000 bales in 1869, and it is not likely that any important decline of price can take place. There are symptoms, however, that if the manufacturer will not benefit by cheaper raw material, he will benefit by higher prices for finished goods. The markets both at home and abroad are sounder. At home, in particular, the cheapness of food is producing its invariable stimulating effects on the demand for clothing and other commodities. Indeed, as we shall see presently, the limitation in the consumption of cotton goods in the three years 1867-69 has been almost wholly at home.

(VI).—*Raw Cotton. Sources of Supply to United Kingdom, 1868-70. Actual and Estimated.* (Ellison and Haywood's Circular.)

In 1,000's of bales.

From, and Average Weight of, Bales in Pounds in 1869.	1870. Estimate.	1869.	1868.	1860.
	Bales.	Bales.	Bales.	Bales.
America (437)	1,275	1,040	1,269	2,583
India (370)	1,600	1,496	1,452	563
Brazil (160)	550	514	637	103
Egypt, &c. (504)	230	227	202	106
West Indies (203)	105	105	100	—
Total import.....	3,760	3,382	3,660	3,366
Stock, 1st January	460	498	555	—
Total supply.....	4,220	3,880	4,215	—
Less export	850	791	915	—
Less stock, 31st December	3,370 510	3,089 460	3,300 498	— —
Consumption	2,860	2,629	2,802	—
Average per week	55	50	54	53

"We conclude this part of the inquiry with our usual Table (VII) of the course of the cotton trade for a series of years:—

(VII).—*United Kingdom, 1857-69. Estimated Value of Raw Cotton Imported, Re-Exported, and Consumed.* (Ellison and Haywood's Circular.)

[00,000's omitted, thus 55,2 = 55,200,000*l.* The bales are given without this abbreviation.]

Years.	Import.		Exported.	Consumed, United Kingdom.		
	Value.	Price.	Value.	Value.	Total Weight.	Bales per Week, 400 lbs. each.
	Min. £	Per lb.	Min. £	Min. £	Min. lbs.	Bales.
1869.....	55,2	11 $\frac{1}{4}$	11,3	48,8	940,	45,140
'68.....	52,0	9 $\frac{1}{2}$	11,6	41,0	996,	47,890
'67.....	53,8	10 $\frac{1}{2}$	14,0	41,2	954,	45,890
1866.....	75,8	13 $\frac{1}{2}$	19,5	51,9	890,	42,829
'65.....	63,2	15 $\frac{1}{2}$	17,1	47,2	718,	34,550
'64.....	82,2	22	22,1	52,4	561,	26,980
1863.....	58,0	20 $\frac{1}{2}$	21,6	40,7	476,	22,910
'62.....	31,1	14	12,4	26,7	449,	21,620
'61.....	38,7	7 $\frac{1}{2}$	7,9	32,2	1,005,	49,300
1860.....	36,6	6 $\frac{1}{2}$	5,5	28,9	1,079,	51,890
'59.....	32,2	6 $\frac{1}{2}$	4,1	27,6	977,	47,000
'58.....	27,2	6 $\frac{1}{2}$	3,3	24,8	907,	} Not given
'57.....	28,6	7 $\frac{1}{2}$	3,5	24,8	825,	

"We have still in this table, as regards 1869, figures very unfavourable when compared with the model pre-war year, 1860. In 1869 we paid 55 instead of 36 millions sterling for nearly the same quantity of raw cotton—and the additional 19 millions of money still left us with raw material equal to only 4 $\frac{1}{2}$ days per week full time. Our manufacturing power—or 'spindle power,' as in the language of the trade—has outgrown largely both the supply of the raw material and the capacity of the buyers of the finished goods.

"An official return obtained by Mr. Baines in the course of last year enables us to ascertain the exact nature and distribution of this temporarily excessive spindle power. The return relates to cotton, woollen, &c., and linen, &c., factories in the United Kingdom in 1868, and is in continuation of similar returns for 1856 and 1861. First, as regards number of factories and persons employed :—

(VIII).—*Factories in United Kingdom. Official Returns 1856, 1861, and 1868. Number of Factories and Persons Employed.*

Kind of Manufacture.	Years.	Factories.				Persons Employed. [000's omitted.]			
		England and Wales.	Scot- land.	Ire- land.	Total.	England and Wales.	Scot- land.	Ire- land.	Total.
		No.	No.	No.	No.	No.	No.	No.	No.
Cotton	1856	2,046	152	12	2,210	341,	35,	3,	380,
	'61	2,715	163	9	2,887	407,	41,	3,	451,
	'68	2,405	131	13	2,549	357,	40,	4,	401,
Woollen, worsted, and shoddy.....	1856	1,793	204	33	2,030	156,	10,	1,	166,
	'61	1,968	201	42	2,211	160,	13,	1,	173,
	'68	2,211	207	47	2,465	233,	18,	1,	253,
Flax, hemp, and jute	1856	139	168	110	417	20,	32,	29,	80,
	'61	143	192	105	440	20,	39,	34,	94,
	'68	155	169	148	472	25,	52,	58,	135,

“The next table relates to spindle power

(IX).—*Factories in United Kingdom. Official Returns, 1856, 1861, and 1868. Spindle Power.*

[000's omitted, thus 25,818, = 25,818,000.]

Kind of Manufacture.	Years.	Spindles.				Increase or Decrease.
		England and Wales.	Scotland.	Ireland.	Total.	
		No.	No.	No.	No.	Per cent.
Cotton	1856	25,818,	2,041,	150,	28,010,	—
	'61	28,352,	1,915,	120,	30,387,	8
	'68	30,478,	1,397,	124,	32,000,	6
Woollen, worsted, and shoddy.....	1856	2,798,	293,	20,	3,111,	—
	'61	3,092,	356,	23,	3,471,	12
	'68	6,045,	385,	26,	6,455,	9
Flax, hemp, and jute	1856	441,	278,	567,	1,288,	—
	'61	345,	312,	594,	1,252,	3
	'68	448,	381,	900,	1,670,	30

“We have here, in cotton factories in England and Wales, an increase of 669 factories between 1856 and 1861, and an increase of $2\frac{1}{2}$ millions of spindles; between 1861 and 1868 the factories decreased by 310, but the spindles increased by a further 2 millions—indicating the abandonment of the older mills, and the starting of newer mills with more complete machinery.

“And when the increase of spindle power is analysed we arrive at once at the result that, while in Scotland, Cheshire, Derbyshire,

and some minor areas, there has been a diminution of more than 1 million spindles, there has been in Lancashire an increase of nearly $2\frac{3}{4}$ millions of spindles. These are the figures :—

Cotton. Spindle Power, 1868 compared with 1861.

District.	1868 more than 1861.	1868 less than 1861.
	Spindles.	Spindles.
Lancashire	2,630,000	—
Warwickshire.....	51,000	—
Cheshire	—	175,000
Derbyshire	—	139,000
Yorkshire	—	38,000
Nottinghamshire	—	30,000
Scotland	—	518,000
	2,681,000	901,000

“We said just now that the real difficulty of the cotton trade since 1865 has been the falling off of the home demand. The export demand for India, China, Egypt, and generally all the countries rendered rich by the treasure poured into them during the American civil war, has much more than maintained itself. For example, we have the following figures of the exports in quantity and value of all kinds of cotton manufactures during the two periods of three years 1859-61 and 1866-68 :—

Years.	Quantity.	Value.
	Min. yds.	Min. £
1859-61	7,900	120
'65-68	8,400	162

“If present appearances are justified by the further results of 1870 the home demand will sensibly revive, and so remove in a measure the fundamental difficulties of the Lancashire producers.

“The increase in the woollen and worsted, and in the linen and hemp factories, is considerable both in spindles and persons employed.

“Comparing the three periods we have the following results :—

Persons Employed.

Manufactures.	1856.	1861.	1868.
Cotton	380,000	451,000	401,000
Woollen, &c.	246,000	267,000	388,000
	626,000	718,000	789,000

“We see here a large part of the real causes of the localisation of the distress occasioned by the cotton famine. Taking the country

as a whole, the enlargement of the woollen, worsted, and linen industries compensated for the contraction of the cotton manufacture.

"The following are the conclusions which the foregoing investigation of the condition and prospects of the cotton trade seems to justify:—

"1. That it is probable that the severest period of the depression has been surmounted, and that in 1870 the revival of the home demand for cotton goods will enable the manufacturers, even with raw cotton at $11\frac{1}{2}d.$ or $12d.$ per lb., to obtain a reasonable margin of profit on finished goods.

"2. That the probability of any speedy fall of raw cotton to the pre-war price of $7d.$ is still distant, and depends in the largest degree upon the industrial reorganization of the Southern States—a reorganisation, however, of which there are some evidences.

"3. That the difficulties of the post-war period, 1865-69, have not arisen in the export demand for cotton goods; on the contrary, the export demand of 1865-68 has exceeded that of 1859-61.

"4. That as a result of the calamities in Lancashire since 1861 a large number of the manufacturers at present in possession of the field have obtained their mills and plant at very low prices, and consequently re-enter upon the competition with considerable advantage.

"5. That taking the United Kingdom as a whole, the enlargement of the woollen, worsted, shoddy, linen, hemp, and jute manufactures since 1861 have more than counter-balanced the contraction of the cotton industry.

"All the reports of the iron trade in 1869 represent decided improvement, not so much in prices as in the amount and steadiness of the demand. Higher prices were obtained during the last two months of the year. The four great iron regions are South Wales, Staffordshire, Cleveland, and the West of Scotland. Staffordshire used to take the lead and divide it with the Clyde; but during the last six or eight years Cleveland and South Wales have asserted and obtained equal, if not superior, rank.

"The year 1869,' say Messrs. W. Fallows and Co. (Liverpool), quoted *passim*, 'has witnessed a gradual but steady improvement in the iron trade. The increased demand for rails, which was felt to some extent in 1868, was further developed in 1869, and the effect of this, though somewhat delayed, was manifest towards the close of the year in the higher prices which prevailed for other descriptions of manufactured iron. Our largest customers for rails have again been Russia and the United States—the former taking 251,000 tons, against 101,000 tons in 1868—and the latter 278,000 tons, against 248,000 tons in 1868. The home demand during 1869 was affected to a considerable extent by the depressed condition of the cotton, woollen, and other manufacturing trades, which prevented any large expenditure in repairs or new works, but the requirements for shipbuilding purposes were on an increased scale.

"The extraordinary demand for rails led to a considerable improvement in price. Beginning in 1869 at $6l.$ $10s.$ to $6l.$ $15s.$ per

ton, the price advanced to 7*l.* 5*s.*, f.o.b. The production of the rail mills was strained to utmost during the year, and now that the makers on the east coast of England have entered so largely into this department, it is estimated that the capacity for producing rails is equal to about 1,000,000 tons per annum. The rail produced in 1869 (say about 900,000 tons) was almost wholly exported to foreign countries.'

"As regards the Cleveland iron district, representing by its central town (now a borough), Middlesbro', the *Leeds Mercury* quoted *passim*, says:—

"The total make of pig iron in Cleveland in 1869 will not be far short of 1,450,000 tons. The price of No. 3 pig iron was quoted in January (1869) at 45*s.* per ton, advanced to 46*s.* in April, and dropped in July, August, and September to 43*s.* 6*d.*, and it was not until October that it again reached 45*s.* In December an advance to 50*s.* was established. The great question of *steel making* at a cheap cost from Cleveland iron is still in abeyance. The royalty on Bessemer steel will be reduced to 2*s.* 6*d.* per ton in February, 1870, when it is expected that the demand for steel rails will greatly increase, and the gradual adoption of them by leading railways indicates the importance of the subject.'

"Several successful efforts have been made in 1869 to establish the practice of courts or councils of conciliation and arbitration in cases of dispute between masters and men in the iron and other trades. In May such a council was set up by mutual agreement in the Cleveland district, the efforts of Mr. Rupert Kettle, a county court judge, near Birmingham, and eminent for the services he has rendered as a peace-maker in trade disputes, having assisted largely in bringing the scheme to maturity. The first active business of the court was to award an advance of 5 per cent. in wages. Towards the close of 1869 other proceedings were taken by the court which, after some delay, ended in the concession of a further rise of 10 per cent. in wages from 1st January, 1870, with the understanding that the subject of any further rise is not to be agitated till 1871; in other words, labour and capital have come to terms for at least a year, and the masters can enter into contracts accordingly. This is a result sensible and creditable to all the parties concerned.

"The legislation promised in 1870, as the result of the royal commission on trades' unions, will take the only possible form of an act legalising all combinations of masters or men for the purpose of settling the terms on which they will or will not offer or accept employment; but with such comprehensive definitions of intimidation as will protect dissentients from interference or annoyance. The better technical education being provided must very soon include a reasonable provision for teaching elementary economic science in all schools; and until knowledge of this kind is made part of the most ordinary instruction, we cannot be free from the danger of Jack Cade doctrines both in the higher and the humbler classes, for in both cases protection and monopoly of some kind is the object arrived at.

"The year has been marked by a noisy rather than serious

agitation in favour of extensive schemes of emigration to the colonies, to be conducted or subsidised by the State. The results have been partial, and the discussion has still further established the doctrine that of all enterprises emigration is emphatically the one to be left wholly to the knowledge, discretion, and forethought of individuals. To induce a family of poor persons to go many thousands of miles to a distant and rude country is a very formidable responsibility to be undertaken by any public body; and unless undertaken in pursuance of motives, feelings, and relationships, which no public body can hope to understand, is far more likely to end ill than well. The parties really interested in carrying on active measures for procuring emigrants are the colonial legislatures. To them labour of certain descriptions is a vital necessity. In England the real difficulty is one not of surplus but of badly distributed labour. The poor law, which so long upheld the barbarism of a law of settlement, and so imprisoned the labourer in the parish where he was born, is at the bottom of much of the present difficulty—a difficulty, however, not likely to be more than temporary—except in London, where the burden and perplexity of poor law control is not likely to diminish, seeing that to the metropolis gravitates no small part of the helplessness, depravity, and disease of the whole nation.

“There were, in 1869, seven alterations in the minimum rate of discount at the Bank of England. The year opened with 3 per cent., became 4 and $4\frac{1}{2}$ in April, May, and June, fell to $2\frac{1}{2}$ in August, and rose to 3 in November, at which figure the rate remained into 1870.

“The following Table (X) shows the condition of the Bank at the dates of alteration, and, of course, indicates, as all similar tables must do, the permanent influence exerted by the rise and fall of the banking reserve:—

(X).—*Bank of England. Alterations of Minimum Rates of Discount, 1868-69.*

{0,000's omitted, thus 24,09 = 24,090,000.}

Date of Alteration.	Rate.	Circulation, including B. P. Bills.	Bullion Reserve.			Securities.			Total Deposits
			Banking Department.	Issue Department.	Total.	Public.	Private.	Total.	
	Per cent.	Min. £	Min. £	Min. £	Min. £	Min. £	Min. £	Min. £	Min. £
1868.									
19 Nov.	$2\frac{1}{2}$	24,09	9,86	8,49	18,35	15,30	17,32	32,62	23,84
3 Dec.	3	24,07	9,57	8,52	18,09	15,07	17,64	32,71	23,63
1869.									
1 April	4	24,45	8,24	8,98	17,22	14,97	18,93	33,90	23,55
6 May	$4\frac{1}{2}$	24,46	7,57	9,01	16,58	14,02	17,03	32,05	21,04
10 June	4	24,30	10,78	7,85	18,63	14,15	17,78	31,93	24,12
24 „	$3\frac{1}{2}$	28,13	11,91	7,68	19,59	14,24	16,91	31,15	24,47
15 July	3	24,42	10,85	8,92	19,77	15,73	16,13	31,36	23,86
19 Aug.	$2\frac{1}{2}$	24,20	12,26	8,70	20,96	14,30	14,24	28,54	21,87
4 Nov.	3	24,68	9,52	9,07	18,59	13,81	16,53	30,34	21,36

"In the Appendix we have collected for the three years 1867-69 from the weekly records of the *Economist* the rates of discount for current first class bills prevailing in the ten most important commercial centres in Europe; and in the following Table (XI) a summary is given of the more extensive details contained in the Appendix, the figures taking the form of the annual average rate at each place, both as regards the leading public bank and the open market:—

(XI).—*European Rates of Discount, 1869, 1868, and 1867. Average Annual Rates per Cent. per Annum, at Places as under, being Summary of Details given in Appendix.*

Places.	1869.		1868.		1867.	
	Principal Bank.	Open Market.	Principal Bank.	Open Market.	Principal Bank.	Open Market.
London	3½	3	2½	1½	2½	2½
Paris	2½	2½	2½	1½	2½	2½
Frankfort	3	2½	"	"	2½	2
Amsterdam	3½	3½	2½	2½	3½	3
Hamburg	—	2½	—	1½	—	2
Brussels.....	2½	2½	2½	2½	2½	2½
Berlin	4½	3½	4	2½	4	3½
Vienna	4½	4½	4	4	4	4
St. Petersburg	6½	6½	7	7½	7	8
Turin.....	5	5	5	—	5	—
Madrid	5½	5	5	—	5½	—

"During 1869 it would appear that the rate has been about half per cent. *lower* than London at Paris, Frankfort, Hamburg, and Brussels. At Berlin and Amsterdam the rate has been from a quarter to a half per cent. *higher* than London, and at Vienna nearly 1½ per cent. *higher*. The Petersburg rate is more than double the London rate, and Turin and Madrid are too insignificant to exert much influence. There is a marked tendency at the present time to equalise rates of discount between the more important financial centres. Telegraphs and railways afford ever increasing facilities for such equalisation; and at Frankfort, Paris, London, Berlin, and in Holland, there are many institutions of the first celebrity and credit which employ large funds in operating on the exchange so as to move masses of capital represented by bills, securities to bearer, shares, &c., from the less to the more profitable markets. The effect of these developments of enterprise and credit in France and Germany during the last twenty years has been so immense as, in a large degree, to change the character of the people of those countries, and raise up already a powerful mercantile middle class, the influence of which in favour of peace and economy is becoming very manifest. The same process is going on in Austria, Hungary, Russia, and to some extent in Italy, and even Spain.

"There has been a further clearing up during 1869 of the scandals bequeathed by the prosperity years 1863-65. The directors of *Overend, Gurney, and Co. (Limited)*, have been finally acquitted by a jury on the criminal charge of wilfully intending to defraud in the issue of the prospectus—and, at present, the civil actions against them for damages do not seem to be proceeding. The promoters of *Barned's Bank (Limited)*, at Liverpool, have also, after a long investigation before the lord mayor, on a similar criminal charge, been discharged. A corresponding criminal prosecution of *Lane, Hankey and Co. (London)*, was carried on for several weeks, but the lord mayor finally refused to send the case to trial. As the law at present stands it is almost impossible to bring the gravest commercial delinquencies connected with the formation and management of companies within the criminal law. And there is, besides the defect of the law itself, the absence of any public officer officially bound to originate, or at least assist, the efforts of individuals to bring offenders to justice. It is impossible that such a state of things can continue. As it is, a positive premium is offered to astute and plausible swindlers, and society is disgraced and demoralised by the blazoned riches of men whom no respectable person will approach.

"The *Credit Foncier and Mobilier*, after writing off as bad one half of their capital, have extracted a large sum from the notorious Mr. Albert Grant, who is believed to be living abroad adorned with a title conferred upon him by some foreign state for the lavish expenditure within it of the money of his then admiring circle. Mr. Vice-Chancellor Malins has before him the affairs of the *Imperial Land Company of Marseilles*, one of the most audacious of the concoctions of 1864-65, and he promises not to part with the proceedings until the whole story has been made public.

"A note at foot* will convey some idea of the loss and misery

* The official liquidator of the *Joint Stock Discount Company (Limited)* has issued an approximate statement of its affairs up to the 31st of December, 1869. According to this the debts and liabilities, which at the date of the last statement had been reduced to 133,742*l.*, have been further reduced by 56,768*l.*, the sum remaining to be provided being 76,974*l.*, exclusive of interest and of claims not yet established. The interest will probably amount to 100,000*l.*, and of this 34,440*l.* has already been paid. In the suit which has been decided against *Barned's Banking Company*, that company have intimated their intention to appeal to the House of Lords, and until this question has been disposed of, it is probable no further dividend will be paid. The contributories are 1,102 in number, holding 79,600 shares, and the total amount paid to the 31st of December, 1869, in respect of the calls made during the liquidation, was 649,632*l.* Since that date 1,665*l.* has been received, and about 28,335*l.* additional is expected. Among the deplorable facts of this case, it is mentioned that there are fifty-two contributories, who hold in the aggregate 3,147 shares, from whom no payment can be safely relied on. To this date fifty-two persons on the list of contributories, holding in the aggregate 9,510 shares, have become bankrupts or have executed trust deeds. Evidence of inability to pay in full had been furnished by one hundred and nine contributories, who hold in the aggregate 11,051 shares, and of these ninety-six persons have made proposals to compromise their liability. In sixty-six cases terms of compromise have been arranged with the approval of the court, and there are twenty-three cases under consideration. The number of contributories whose present addresses have not yet

entailed by the *Joint Stock Discount Company (Limited)*, and the facts there given are weak samples of the story to be told of scores of similar cases.

"An efficient Bankruptcy Law did at length come into force on 1st January, 1870, and so sensible were the race of scheming debtors of the increasing rigour of the new law, that towards the end of December every *Gazette* contained hundreds of declarations of failures under the expiring statute. The most flagrant defect in the bankruptcy code is now the inefficiency of the Court of Chancery as a machinery for winding up insolvent joint stock companies. An official liquidator has come to be regarded as a terror and an extravagance far greater than even Chancery itself. The remedy seems to be that to the Court of Bankruptcy, when fully constituted, must be committed all jurisdiction both as regards persons and companies—and it may be added especially *insurance* companies.

"Last year at length brought the public breakdown of one life insurance company—the *Albert*—long known to be insolvent—and the narrow escape from a similar fate of another office almost of the same magnitude. The amount of life policies open with the *Albert* in Europe and India was about 10 millions sterling. Both offices had pursued a long career of amalgamations with other companies, and a career if possible still more outrageous as regards extravagant current expenditure. At length a time came when increasing mortality, diminishing new business, and excessive expenses, exhausted all their available means, and nothing remained but public confession of the fact, that against the millions of outstanding sums insured there was practically a reserve of a few pence in the pound. Legislation will now follow. It was urged upon the Government twenty years ago, but offices of the character of the *Albert* were astute enough to get it postponed and defeated.

"In the case of insolvent insurance companies, the Winding-up Acts, as administered by the Court of Chancery, are more inapplicable and mischievous than in any other form. A broken down insurance company is a provision for life to a cunning liquidator. Nearly all the engagements of the company are future and contingent, and the process, therefore, extends over years and decades of years if left to itself.

"The condition of the United States and the measures and discussions in progress in various parts of the Union, directed towards a resumption of specie payments, are so important and interesting at the present time that we have devoted to the subject a special group of Appendices, compiled, as will be seen, from a variety of sources.

"Gold stood in January, 1869, at 135, rose to 140 in June, and fell to 120 in the autumn, at which figure, or nearly so, it remains at the end of February, 1870. We said in the review of 1868 that

been ascertained is seventy-five, holding in the aggregate 3,237 shares, and there are 845 shares attributed to ten persons whose liability has not yet been determined. —*Times*, February, 1870.

of the three years 1867-69. We have thus retained at home an unusually large proportion of our annual Californian produce of the precious metals. The evidence of this accumulation is apparent in the fact that while a considerable amount of coin has been distributed at the South, and while California has sent to the Eastern States less of its product than usual, yet the *private coin* on deposit at the Treasury was 36 million dols. on 1st December, 1869, against 23 million dols. on same date, 1868, and $18\frac{1}{2}$ million dols. in 1867—the specie in the associated banks was on 18th December, 1869, 30 million dols. against $18\frac{1}{2}$ in December, 1868.

“It is tolerably clear from these extracts that a process of rapid and solid recovery has been set in motion in the States—a recovery so satisfactory that if left to itself it seems probable that the present price of 120 will fall still lower in a short time. The fall of prices, however, and the certain fall of wages is distasteful to immense numbers of people, especially in the West and South, and accordingly the intelligence from New York of 22nd February, 1870, has the following:—

“The passage of the bill through the House of Representatives, yesterday, for *expanding* the currency of the country to the extent of 60,000,000 dols., has provoked general indignation throughout the Eastern States. The bill was brought forward to carry out the ideas of Western politicians, and was purely a Western measure. It has been carried in the House by the union of Western and Southern democrats and republicans. The bill is deplored in the Eastern States as a further step away from, rather than towards, specie payments. It will be bitterly and strenuously resisted in the Senate.

“The Census of the Union is taken this year, and will so alter the distribution of political power in the House of Representatives that quite three-fourths of the members will be returned by Western and Southern constituencies. We have always regarded this redistribution of power as a crisis full of danger to the maintenance of a sound and prudent financial policy.

“An account will be found in Appendix (T) of the now celebrated Gold Panic in New York in September, 1869, occasioned by the failure of a powerful conspiracy or combination entered into by a clique of operators to get the control of the gold room for the purpose of forcing up the quotation of greenbacks, and compelling the sacrifice of securities at reduced prices.

“The protectionist party are still supreme at Washington. But a free trade opposition is already vigorous, and Mr. David Wells, in spite of vehement abuse, continues to issue those special reports on commerce and taxation which show, on official data and authority, that high duties are rapidly extinguishing one trade after another.

“To add to these complications, the Supreme Court have decided (February, 1870)—Mr. Chief Justice Chase being the expositor of the law—that the Legal Tender Act of 25th February, 1862, was unconstitutional as regards all contracts entered into before that date, and consequently that all such contracts can only be satisfied

by payment in gold. Debtors, therefore, who for the last eight years have been rejoicing in the happy chance which, by means of greenbacks, made them rich at the expense of their creditors, find themselves suddenly replaced in their former bondage; and if we could suppose the decision to be pursued to its full legal and logical consequences, an amount of confusion and quarrelling would be provoked from one end of the Union to the other which would render all dealings impossible.

“ We part with 1869 with the certainty that it has been in every way more prosperous than any of the four years which preceded it, and with a moderately firm belief that 1870 will carry forward the amelioration already manifest throughout Europe and America.”

This comprehensive history is followed in the original by a series of detailed statements, derived from the most trustworthy trade reports and other documents, relating to special branches of commerce and finance, arranged in ten sections, viz. :—

- I.—Corn and Cattle Trades.
- II.—Colonial and Tropical Produce.
- III.—Wine Trade.
- IV.—Raw Materials.
- V.—Shipping and Freights.
- VI.—Cotton Trade.
- VII.—Linen Trade.
- VIII.—West Riding Woollen, Worsted, and other Trades.
- IX.—Railway Traffic (United Kingdom), 1869, and Six preceding Years.
- X.—English and French Money Market, 1869.

The Appendix to the History embraces the subjects named below, and which will in the supplement to the *Economist* be found in great detail :—

- A.—Wholesale Prices of Commodities in London and Manchester :
Average of Six Years, 1845-50 : Selected dates, 1851-68 :
and Monthly, 1869.
- B.—Foreign Exchanges, 1841-69.
- C.—Wholesale Prices, 1845-69 : Proportionate Results.
- D.—Bank of England : Weekly Return.
- E.—Bank of France.
- F.—European Rates of Discount per Cent. per Annum, Three
Years, 1869-68-67.

- G.—Imports of Gold and Silver, in Millions Sterling, into the United Kingdom, 1864-69.
- G.—Exports of Gold and Silver, in Millions Sterling, from the United Kingdom, 1864-69.
- H.—The Scottish Joint Stock Banks, 1869.
- I.—United Kingdom: Imports and Exports of Gold and Silver Bullion and Specie in the Years 1868-69.
- J.—Gold and Silver, 1851-69: Exports to Egypt and the East, from United Kingdom, &c.
- K.—Prices of Grain: England and Wales: Calendar Year.
- L.—Financial and Commercial Events, 1869.
- M.—Agricultural Statistics: United Kingdom, 1869.
- N.—The January (1870) Half-Yearly Reports of the London Joint Stock Banks.
- O.—The London Discount Companies.
- P.—Statistics of the Bankers' Clearing House, and the Evidence they afford of Financial and Commercial Recovery, 1869.
- Q.—Changes in Mercantile Firms, December, 1869.
- R.—Extent of British Investments in Foreign Loans.
- S.—Cotton Trade, 1855-61 and 1862-68.
- T.—United States: The Retrospect of 1869.
- U.—Business Changes in Southern States.
- V.—The Gold Panic in New York, September, 1869.
- W.—Condition and Prospects of the United States.
- X.—The Decline of American Commerce.
- Y.—Mr. Secretary Boutwell's and Mr. Sumner's Scheme of Finance and Funding, December, 1869.
- Z.—United States: The Condition of Business, December, 1869.
- AA.—United States: The Public Debt, 1869-70.
- BB.—Rapid Development of Railroads in United States.
- CC.—United States: Greenbacks declared by Supreme Court to be Illegal as regards Pre-War Debts.
- DD.—The Legal Tender Decision and its Effects.

II.—*Cost of Collecting the Customs' Revenue, 1868.*

FROM the *Pall Mall Gazette*:—

"The following is a return of the gross amount, cost of collection, and net produce of the Customs' revenue of the United Kingdom in 1868; showing the gross amount, expense, and net yield of each custom house. The results are divided into nine classes, according to the revenue collected:—

Summary and Totals of Different Classes in the Table.

Summary of the Yield in Different Classes.	Customs' Expenses.	Proportion of Coast Guard Expenses.	Total Cost of Collection.	Revenue Collected.	Loss to the Country.	Gain to the Country.
CLASS 1.	£	£	£	£	£	£
Loss on thirty-four houses*	38,708	51,597	90,305	48,118	42,187	—
CLASS 2.						
Yield from eleven houses under 1,000l. each	10,562	14,079	24,641	29,135	—	4,494
CLASS 3.						
Yield from twenty-nine houses under 5,000l. each	42,937	57,240	100,177	172,579	—	72,402
CLASS 4.						
Yield from twenty-one houses under 20,000l. each	29,663	39,543	69,206	297,873	—	228,667
CLASS 5.						
Yield from twelve houses under 50,000l. each	26,035	34,708	60,743	476,633	—	415,920
CLASS 6.						
Yield from nine houses under 100,000l. each....	41,760	55,677	97,437	721,832	—	624,395
CLASS 7.						
Yield from nine houses under 500,000l. each....	67,770	90,357	158,127	1,919,452	—	1,761,325
CLASS 8.						
Yield from five houses under 1,500,000l. each }	78,405	104,535	182,940	5,270,287	—	5,087,347
CLASS 9.						
Liverpool	111,580	—	111,580	3,079,566	—	2,967,986
London	355,400	—	355,400	10,694,494	—	10,339,094
	802,820	447,736	1,250,566	22,709,999	42,187	21,501,630
General expenses not returned separately by the Customs, and ignored in the separate Government returns of the expenses of each port.....	205,000	270,000	475,000	1,725,556	—	—
	1,007,820	717,730	1,725,556 or 8·25 per cent. on the net amount	20,984,443 42,187	—	—
Less drawbacks over entries, &c. }	—	—	—	20,942,256 290,346	—	—
Net customs' revenue	—	—	—	20,651,910	—	—

* This loss is not balanced till 21 custom-houses from Class 3 and the 11 houses from Class 2 are added; so that out of 132 custom-houses, 66, or exactly one-half, are a loss to the country. Were removals under bond contraband not permitted, 10 custom-houses would collect the revenue. Adding the extra expenses not separately allotted by Government, over 100 out of 132 custom-houses are a loss to the country.

Separate Revenue and Expenses of each Port, as far as they are divided by Government.

CLASS 1.—Custom Houses which are a Loss to the Country.

Town.	Customs' Expenses.	Proportion of Coastguard Expenses at 1½.	Total Cost of Collection.	Revenue Collected in 1868.	Loss to the Country.	Percentage of Cost of Collection to Receipts.
	£	£	£	£	£	£
Aberystwith	820	1,093	1,913	73	1,840	2,620
Ardrossan	510	680	1,190	139	2,317	856
Beumaris	1,120	1,493	2,613	296	1,061	883
Borro'stoness	680	906	1,586	401	1,185	396
Cardiff	8,150	10,866	19,016	15,466	3,550	123
Cardigan	460	613	1,073	—	1,073	—
Campbeltown	430	573	1,003	802	201	125
Falmouth	2,460	3,280	5,740	5,201	489	109
Faversham	620	826	1,446	1,056	390	137
Fleetwood	620	826	1,446	935	511	155
Fowey	1,100	1,466	2,566	592	1,974	433
Kirkwall	890	1,186	2,076	—	2,076	—
Littlehampton	860	1,146	2,006	1,249	757	161
Lerwick	590	786	1,376	—	1,376	—
Llanelli	1,640	2,186	3,826	1,688	2,138	226
Lowestoft	1,330	1,773	3,103	2,882	221	108
Lyme	380	506	886	440	446	201
Maldon	870	1,160	2,030	268	1,762	757
Middlesborough	1,500	2,000	3,500	1,859	1,641	188
Milford	1,420	1,893	3,313	147	3,166	2,254
Padstow	450	600	1,050	49	1,001	2,143
Peterhead	890	1,186	2,076	1,505	571	138
Runcorn	660	880	1,540	1,305	175	112
Rye	580	706	1,286	5	1,231	24,720
Stornoway	580	773	1,353	11	1,342	12,300
Stranraer	450	600	1,050	146	904	139
Scilly	490	653	1,143	1	1,142	114,300
Skibbereen	664	885	1,549	139	1,410	1,114
Swansea	4,060	5,413	9,473	8,640	863	110
Wells	560	746	1,306	180	1,126	726
Wisbech	710	948	1,656	954	702	173
Wick	1,170	1,560	2,730	803	1,927	340
Westport	434	578	1,012	806	206	126
Wigtown	610	813	1,423	—	1,423	—

CLASS 2.—Custom Houses which Field Less than £1,000.

Towns.	Customs' Expenses.	Proportion of Coastguard Expenses at 1½.	Total Cost of Collection.	Revenue Collected in 1868.	Gain to the Country.	Percentage of Cost of Collection to Receipts.
	£	£	£	£	£	£
Alloa	960	1,280	2,240	2,577	337	87
Bideford	1,001	1,334	2,335	3,124	789	75
Banff	870	1,160	2,030	2,188	158	93
Dartmouth	1,550	2,066	3,616	4,428	812	82
Drogheda	754	1,005	1,759	1,909	150	92
Hayle	810	1,080	1,890	2,783	893	68
Inverness	1,900	2,533	4,433	4,638	205	96
Montrose	1,260	1,680	2,940	3,200	260	92
Teignmouth	580	773	1,353	1,390	37	97
Youghall	347	462	809	1,029	220	79
Woodbridge	530	706	1,236	1,869	633	66

Separate Revenue and Expenses of each Port—Contd.
CLASS 3.—Custom Houses which Yield between £1,000 and £5,000.

Towns.	Customs' Expenses.	Proportion of Coastguard Expenses at 14.	Total Cost of Collection.	Revenue Collected in 1868.	Gain to the Country.	Percentage of Cost of Collection to Revenue.
	£	£	£	£	£	£
Ayr	490	653	1,143	2,876	1,733	40
Bridport	560	746	1,306	3,202	1,896	41
Berwick	835	1,113	1,948	5,738	3,790	34
Bridgwater	1,198	1,597	2,795	5,827	3,032	48
Ballina	575	766	1,341	2,752	1,411	49
Castletown	500	666	1,166	3,478	2,312	34
Chepstow	670	893	1,563	5,228	3,665	30
Cowes	1,000	1,333	2,333	4,173	1,840	56
Coleraine	642	856	1,498	5,494	3,996	27
Deal	680	906	1,586	3,139	1,553	51
Dover	4,050	5,400	9,450	13,580	4,130	70
Dumfries	970	1,293	2,263	4,606	2,343	49
Grangemouth ..	2,460	3,280	5,740	7,220	1,480	80
Granton	530	706	1,236	2,275	1,039	54
Hartlepool	6,840	9,120	15,960	17,411	1,451	92
Maryport	600	800	1,400	3,441	2,041	41
Penzance	960	1,280	2,240	5,293	3,053	42
Poole	1,120	1,493	2,613	4,015	1,402	65
Port Glasgow ..	940	1,253	2,193	3,921	1,728	56
Ramsey	640	853	1,493	5,074	3,581	29
Ramsgate	1,040	1,386	2,426	3,616	1,190	67
Rochester	1,880	2,506	4,386	5,872	1,486	75
Scarborough ..	540	720	1,260	2,514	1,254	53
Shields, North	7,350	9,800	17,150	21,962	4,812	78
„ South	2,200	2,933	5,133	9,721	4,588	50
Truro	1,040	1,386	2,426	6,903	4,477	35
Wexford	1,527	2,036	3,563	7,047	3,484	51
Whitby	590	786	1,376	3,252	1,876	42
Workington ..	510	680	1,190	2,949	1,759	40

CLASS 4.—Custom Houses which Yield between £5,000 and £20,000.

Towns.	Customs' Expenses.	Proportion of Coastguard Expenses at 14.	Total Cost of Collection.	Revenue Collected in 1868.	Gain to the Country.	Percentage of Cost of Collection to Receipts.
	£	£	£	£	£	£
Arbroath	930	1,240	2,170	16,923	14,753	13
Barnetaple	580	773	1,353	7,640	6,287	18
Carlisle	700	933	1,633	19,037	17,404	9
Carnarvon	1,340	1,786	3,126	8,855	5,729	36
Colchester	1,400	1,866	3,266	10,720	7,454	30
Folkestone	3,880	5,173	9,053	14,428	5,375	63
Gainsborough ..	410	546	956	8,742	7,786	11
Geole	1,320	2,426	4,246	18,101	13,855	23
Galway	1,065	1,420	2,485	17,637	15,152	14
Halifax	540	720	1,260	15,380	13,120	8
Harwich	2,020	2,693	4,713	18,771	14,058	25
Lancaster	1,270	1,693	2,963	12,468	9,505	24
Lynn	1,270	1,693	2,963	15,835	12,872	18
Newhaven	2,950	3,933	6,883	16,736	9,853	41
Newry	1,733	2,310	4,043	16,748	12,705	24
Perth	700	933	1,633	14,815	13,182	11
Portsmouth	2,760	3,680	6,440	23,845	17,405	27
Shoreham	1,300	1,733	3,033	9,343	6,310	32
Troon	650	866	1,516	8,402	6,886	18
Tralee	685	913	1,598	13,376	11,778	12
Weymouth	1,660	2,213	3,873	11,071	7,198	35

*Separate Revenue and Expenses of each Port—Contd.***CLASS 5.—Custom Houses which Yield between £20,000 and £50,000.**

Towns.	Customs' Expenses.	Proportion of Coastguard Expenses at 1 $\frac{1}{4}$.	Total Cost of Collection.	Revenue Collected in 1868.	Gain to the Country.	Percentage of Cost of Collection to Receipts.
	£	£	£	£	£	£
Boston	970	1,293	2,263	37,348	35,085	7
Bradford	650	866	1,516	40,785	39,269	3
Douglas	1,610	2,146	3,756	26,574	22,848	14
Dundalk	590	786	1,376	40,290	38,914	3
Grimsby	4,650	6,200	10,850	59,689	48,839	18
Ipswich	1,440	1,920	3,360	28,496	25,136	11
Kirkcaldy	1,150	1,533	2,683	23,336	20,653	11
Newport	4,380	5,506	7,886	41,492	33,606	19
Preston	1,190	1,586	2,776	51,230	48,454	5
Sunderland	6,830	9,106	15,936	64,504	48,568	25
Sligo	1,305	1,740	3,045	32,442	29,397	9
Yarmouth	2,270	3,026	5,296	30,477	25,181	17

CLASS 6.—Custom Houses which Yield between £50,000 and £100,000.

Towns.	Customs' Expenses.	Proportion of Coastguard Expenses at 1 $\frac{1}{4}$.	Total Cost of Collection.	Revenue Collected in 1868.	Gain to the Country.	Percentage of Cost of Collection to Receipts.
	£	£	£	£	£	£
Aberdeen	3,390	4,520	7,910	80,415	72,505	10
Chester	1,070	1,426	2,496	87,312	84,816	3
Dundee	3,900	5,200	9,100	79,244	70,144	11
Gloucester	4,440	5,920	10,360	61,811	51,451	17
Leeds	610	813	1,423	95,824	94,401	1
Southampton	21,240	28,320	49,560	101,122	51,562	49
Stockton	1,970	2,626	4,596	70,039	65,443	7
Waterford	3,290	4,386	7,676	83,061	75,385	9
Whitehaven	1,850	2,466	4,316	63,001	58,688	7

CLASS 7.—Custom Houses which Yield between £100,000 and £500,000.

Towns.	Customs' Expenses.	Proportion of Coastguard Expenses at 1 $\frac{1}{4}$.	Total Cost of Collection.	Revenue Collected in 1868.	Gain to the Country.	Percentage of Cost of Collection to Receipts.
	£	£	£	£	£	£
Belfast	9,050	12,066	21,116	334,213	313,097	6
Cork	9,550	12,733	22,283	349,945	327,662	6
Exeter	2,420	3,226	5,646	113,582	107,936	5
Hull	21,020	28,026	49,046	342,559	293,513	14
Limerick	2,235	2,980	5,215	107,791	102,576	5
Londonderry	3,965	5,286	9,251	129,709	120,458	7
Manchester	1,650	2,200	3,850	133,064	129,214	3
Newcastle	9,480	12,640	22,120	206,574	184,454	11
Plymouth	8,400	11,200	19,600	202,015	182,415	10

*Separate Revenue and Expenses of each Port.—Contd.**CLASS 8.—Custom Houses which Yield between £100,000 and £1,500,000.*

Towns.	Customs' Expenses.	Proportion of Coastguard Expenses at 1½.	Total Cost of Collection.	Revenue Collected in 1868.	Gain to the Country.	Percentage of Cost of Collection to Receipts.
	£	£	£	£	£	£
Bristol	18,230	24,303	42,533	1,120,439	1,077,906	4
Dublin	17,245	22,993	40,238	974,452	934,214	4
Glasgow	17,710	23,613	41,323	1,112,065	1,070,742	4
Greenock	12,320	16,426	28,747	1,458,271	1,429,525	2
Leith	12,900	17,200	30,100	605,060	574,960	—

CLASS 9.—The Ports of London and Liverpool.

Towns.	Customs' Expenses.	Revenue Collected in 1868.	Gain to the Country.	Percentage of Cost of Collection to Receipts.
	£	£	£	£
Liverpool.....	111,580	3,079,566	2,967,986	4
London	355,400	10,694,494	10,339,094	3

III.—Statistics of London Fires.

FROM the *Times* of the 28th January :—

"The London Fire Engine Establishment, originally formed by the united action of ten insurance companies, commenced its operations on the 1st of January, 1833. It ceased to exist on the 31st of December, 1865, when the staff, plant, and engines were given over to the Metropolitan Board of Works to form the present Metropolitan Fire Brigade. Prior to the transfer, and as a parting gift to his employers—the companies—the superintendent, Captain Shaw, had prepared a series of tables, in which he exhibited, in almost every possible form, the results of the thirty-three years' experience of the old institution, so far, at least, as that experience has been recorded. At that time, no statistics of fires existed; and insurance companies had either been working wholly in the dark or, at best, on the basis of an annual balance of profit or loss; while insurers had no means whatever of forming a judgment about the reasonableness of the terms they were called upon to pay. With regard to many risks, the tables prepared by Captain Shaw proved conclusively that prevailing opinions had been very wide of the truth; and that the calculations of accepted authorities, calculations on which a large amount of insurance business had been based, had been founded upon erroneous data. Captain Shaw hoped and expected that his tables would at once be published; but, for some reason, this was not done, and it is only lately that he has obtained permission to publish them himself. Under the title of *Records of the Late London Fire Engine Establishment*, they are now given to the world; and they furnish an amount of information about fires such as has never before been brought together. Both by the facts they show and by the inquiries they suggest, they promise to be of material assistance to all who are concerned in the business of insurance, and they point out the only way in which the estimation of risks can be reduced to certainty, by the companies, and can be rendered plainly intelligible to the public.

"The tables amount, in all, to 111 in number; but only a few of them can be said to possess any features of general interest. We may pass over the first, which contains a list of the companies by which the establishment was formed, and from time to time supported. The second gives a detailed account of the cost of maintenance, which rose from 7,988*l.* in 1833, to 26,005*l.* in 1865; and which has amounted in all to 530,545*l.* The third table exhibits the whole of the fires for each year, and for the thirty-three years, divided into cases of serious and cases of slight damage, and classified according to trades. The total number is 29,069. It must be borne in mind that this total is much less than that which would be obtained from the books of insurance companies. At the engine establishment a fire has counted as a fire. With the companies a loss counts as a fire; and one fire may occasion a hundred losses. A fire occurring in the centre of a dense block of houses, may spread in all directions. The neighbouring houses may all be damaged, and may all be insured, some of them in two or three or more companies. But the whole disaster would appear, in the tables before us, as one fire, and would be referred, for statistical purposes, to the place in which it originated.

"The 'classification according to trades,' or rather according to the uses to which the buildings were applied, is necessarily somewhat obscure. The 29,069 fires are arranged under 343 heads; some of which are vague, and a few unintelligible. For this Captain Shaw is not responsible; since when he could not amend the original entry by any official record, he has simply copied it. Of late years great care has been taken to describe trades with accuracy, and some of the old entries disappear after certain dates.

"The fires in houses in private occupation were much more numerous than any other class, and amounted to 7,321. Next come those in lodgings, numbering 2,827; so that the two together made up nearly 35 per cent. of the total number. Besides these, there are three other entries, each exceeding one thousand. Fires in premises occupied by 'victuallers,' are set down at 1,325; in premises occupied by 'carpenters and workers in wood, not being cabinetmakers,' at 1,164; and in 'sale shops and offices' (an entry that was discontinued in 1864), at 1,187. For four kinds of occupation the numbers range between 1,000 and 500. 'Linen and woollen drapers and mercers' are answerable for 780 fires; 'cabinetmakers' for 553; 'stables' for 547; and 'bakers' for 533. Of numbers between 500 and 300 there are nine entries. 'Booksellers, binders, and stationers' head the list with 442, and are followed by 'chandlers' with 430, 'oil and colourmen' with 422, 'grocers' with 396, 'tailors' with 344, 'brokers and dealers in old clothes' with 328, 'coffeehouse keepers' with 314, 'buildings under repair' with 312, and 'tinmen, braziers, and smiths' with 304. Twenty-eight entries range from 300 to 100; and only a few of these require special notice. 'Lucifer match makers' stand at 128, 'beershop keepers' at 294, 'unoccupied houses' at 182, and 'eating-houses' at 178. It may serve as a new topic for lecturers on total abstinence, if we mention that the fires arising in hotels, clubhouses, beershops, and all the other places in which we may assume that intoxicating drinks were sold and consumed, amounted to 2,426, or more than 8 per cent. of the whole number. Of numbers below 100 there are 297 entries, of which 64 are single. Among these lower numbers we find many of the trades that are commonly reputed to be dangerous. 'Distillers' are credited with 59 fires, 'naphtha distillers' with 5, 'turpentine distillers' with 8, 'tar distillers' with 42, 'firework makers' with 86, 'gunpowder dealers' with 1 only, 'hay and straw salesmen' with 16, and 'naphtha manufacturers' with 4. Curiously enough, a fire occurred in 1838 on the premises of the 'Fire Preventive Company,' and another, in 1852, at the 'Fire Annihilator manufactory.'

"It is manifest, of course, that the figures quoted above do not represent the risks incidental to various trades. In order that they should do so, it would first be necessary to ascertain in what number of premises each trade was carried on. For instance, there were 533 fires in the establishments of bakers, and 553 in those of cabinetmakers. The apparent equality of risk is at once destroyed when we consider the different numerical strength of the respective trades. In the *Post*

Office Directory for the present year, we find 2,213 bakers and only 716 cabinet-makers; so that the risks of the latter are somewhere about three times as great as those of the former. The business of lucifer match making again, which is reputed to be dangerous, was hardly established when these records were commenced; but during the five years last included in them the fires at lucifer match factories amounted to 30, and those at bakeries to 99. The *Directory* contains the names of only twenty lucifer match makers, and this fact alters the relative dangers of the two occupations in a very material degree. The thirty fires are found to represent a risk more than 112 times as great as that represented by the ninety-nine.

"The fourth table exhibits the alleged causes of fires. These are arranged under 530 heads, of which some are of regular, some of occasional recurrence. Among the former, in the order of their frequency, we find the cause 'unknown' in 9,557 instances. Next comes 'candle' in 3,218, and next 'curtains' in 2,822. It seems probable that candles and curtains must have been associated causes in many of these instances, and the entry 'curtains' is made only twice in 1862, and disappears entirely in the three subsequent years. Fourth in order stands 'gas,' which, under several subdivisions, accounts for 2,225 fires. 'Foul flue' is made answerable for 1,946; 'defect in flue' for 301, and 'flue blocked up' for 153—making a total of 2,400. 'Spark from fire' is recorded 1,255 times; and, after this, the numbers fall abruptly. 'Children playing with fire' comes next in order, with the number 471; then 'smoking tobacco' with 406; then 'lucifers' with 307; then 'stove' with 297; 'hot ashes' with 259; 'intoxication' with 155; 'fire on hearth' with 141; and 'incendiarism' with 133. The 'doubtful' cases—that is to say, cases of doubtful or suspected incendiarism—amount to 190. 'Carelessness' is an entry vague in one sense, but which represents a tolerably constant quantity in human affairs. It was first recorded as a cause of fire in 1841, and ceased to be recorded, save in a single instance, in 1860. In the twenty years it was set down 106 times. In the earlier books of the establishment, fires arising from any kind of trade operations, were ascribed to 'trade;' and 1,132 are so recorded between 1833 and 1847. But in 1844 such fires began to be more exactly classified; and after 1847, the word 'trade' was altogether discontinued. Some of the assigned causes are hard to understand. Among these may be mentioned 'broken windows,' 'defect in wall,' 'easing stop-cock,' 'ink boiling over,' 'mistake of exciseman,' 'old age,' 'thawing water pipes,' and 'high tide.' The broad back of the domestic cat bears the burden of 34 fires. 'Reading in bed' accounts for another 34; and 'sewing in bed' for 3; while 7 are attributed to 'cigar thrown down area.'

"It appears from these figures that many of the agencies to which, in common belief, fires are supposed to be most frequently due, play really a very insignificant part in their production. Lucifer matches, for example, would be thought likely to occasion a large proportion of them. They first appear in the record in the year 1839; and some subsidiary entries, such as 'children playing with lucifers' (95 cases), 'rats gnawing matches,' and the like, together with 20 fires from fuses, raise the number 307, already quoted, to 425. Deducting the 3,044 fires that were recorded before 1839, those caused by lucifers amount to a little more than $\frac{1}{4}$ per cent. of the whole. Paraffin and petroleum, again, are first mentioned in 1859. They are said to have occasioned, in all ways, 24 fires out of 9,024, or a fraction more than a quarter per cent., while 'smoking tobacco' is answerable for six times that proportion. In short, deducting the causes that are unknown, it appears from the records that a very large proportion of fires may be directly traced to some misarrangement of the ordinary domestic arrangements for warming, cooking, and lighting.

"We come next to a series of 101 tables, containing hourly, daily, weekly, and monthly summaries of fires for each year of thirty-three, and for the thirty-three years together. With regard to hours, it appears that the smallest number of fires occurs during the seventh hour a.m.; the largest number during the tenth hour p.m.; and the mean at 6 p.m., and between the third and fourth hour a.m. The difference is very considerable, ranging from a *minimum* of 540, through a mean of 1,211,

to a *maximum* of 2,549. For the hours from 5 a.m. to 5 p.m., there is little difference; the ascent from 6 to 10 p.m. is very rapid; and the descent from 10 p.m. to midnight is equally so. Why there should be five times as many fires at 10 o'clock at night as at 7 in the morning, it is difficult to conjecture; but the fact is of great importance in regulating the hours of duty of the men of the fire brigade, who all return from ordinary leave of absence at 10 o'clock. With regard to days the variation is very small, ranging from a *maximum* of 4,252 fires on Tuesdays, through a mean of 4,153, to a *minimum* of 4,013 on Fridays. It has long been an article of popular belief that an unusually large number of fires happen on Sunday, but this belief is now shown to be unfounded. The Sunday number is 4,150, or three fires below the daily mean. The weekly number averages 559; reaching its *maximum* of 649 in the fifty-first week, and its *minimum* of 480 in the forty-second. The fluctuations are not large, but they are often abrupt, and difficult to understand. Thus a sudden ascent above the average is followed by an equally sudden fall below it. The figures rise from 523 in the forty-fourth week to 632 in the forty-fifth; and fall again, through 591 and 543, to 514 in the forty-eighth. The influence of season is best shown by the months; but the difference produced is less than would be commonly expected. The heat of summer renders all buildings more combustible; the cold of winter increases the sources of combustion. The *maximum*, 2,764, occurred in December; August follows with 2,555; and then comes January, with 2,551. At the other end of the scale are the months most removed from extremes of temperature. The *minimum* number, 2,225, occurred in October, and the next smallest, 2,235, in April.

"Among the few remaining tables there is one containing a list of twelve officers and men of the establishment, including the late Mr. Braidwood, who have been killed on duty. We learn from the preface that about 1,300 have been injured, but of their cases Captain Shaw has not been able to obtain particulars.

"It is reasonable to expect that the publication of these invaluable records will serve to call general attention to the subject of fire risks and of fire insurance. To take the most ordinary case, the insurance of a private dwelling-house, it seems manifest that the common premium of 1s. 6d. per cent. is much more than ought to be demanded or paid. Without allowing for office expenses, it would cover the annual total destruction of one house in every 1,333. In the first place, however, total destruction is very rare, and, of the 7,321 private houses burnt in thirty-three years, 6,132 were 'slightly,' and only 1,180 were 'seriously' damaged. Again, 7,321 houses in thirty-three years give an annual average of 222; but the inhabited houses in London may be roughly estimated at about 600,000, and even the total destruction of 222 annually, would be only one in 2,703. If we estimate the 1,180 serious cases as 'total,' and the 6,132 at 25 per cent. all round, we obtain what is equivalent to the annual total destruction of one house in 7,272. If this estimate be anywhere near the truth, it is plain that either insurance companies must make an enormous profit on private houses (possibly as a necessary set-off against losses on other risks), or that they must expend vast sums upon offices, or in obtaining business. Of course they are entitled to some benefit from the possibility, already noticed, that any fire may reach and consume adjacent dwelling-houses, that do not appear in these records, and we trust that the reports of the metropolitan brigade will, in course of time, furnish data by which this additional source of risk may be estimated at its proper value.

"The insurance companies are still heavily taxed (to the extent of 35l. per million on their annual insurances) for the support of the fire brigade, and it may fairly be questioned whether this tax should be permitted to continue. The stream from a fire engine deluges alike the insured and the uninsured; and the tax is paid by insurers for the purpose of putting out fires in the houses of those who are less provident than themselves, and who should surely be made to pay in their own persons. The amount of uninsured property in London is enormous, and the cost of protecting it must add perceptibly to the premiums charged to insurers. It may fairly be argued that the extinction of fire is a municipal function, proper to be undertaken by the general body of the inhabitants, and in no way the special duty

of commercial companies, whose business it is to estimate the money value of certain risks in which they engage. It would be a great advance upon the present system, if these risks were calculated for a locality, or for a town, instead of, as now, for particular occupations and forms of structure. A good municipal government, including the maintenance of an efficient fire brigade, and the enforcement of proper regulations for the conduct of dangerous trades, would then lower the cost of insurance over the whole of its jurisdiction, and would thus give practical evidence of its value to the governed.

"Without further dwelling upon the possibilities of the future, we may proceed to give all insurers, and all who intend to insure, a valuable practical hint for the present. Before they pay premiums, they should study the terms of the contract offered to them by the company, and should know precisely what they are going to pay for. Policies are worded in various ways; and a certain proportion of them contain clauses by which the companies who issue them could, if they were so minded, escape from all responsibility. A policy is a legal document; and the claims arising under it lie strictly within its four corners. It is worth the while of every man who is not his own lawyer, to submit such a document to careful scrutiny, and to obtain the opinion of a solicitor upon its conditions, before he feels satisfied that, in case of fire, it will hold him harmless from pecuniary loss."

IV.—*The Tenure of Land in Belgium.*

THE following statement appeared in the *Times* of December, 1869, as a letter from William Mure, 12, Lowndes Square, London:—

"As extreme subdivision of property is the peculiar characteristic of Flanders, in order to show the extent to which it prevails, I venture in the first instance to submit to you the following figures, taken from Government statistics.

"The Cadastre survey, published in 1856, states that in West Flanders the arable land, amounting to 677,005 acres, is divided among 86,225 occupiers, showing the proportion of $7\frac{1}{2}$ acres to each.

"In East Flanders, the division of 545,245 acres among 88,305 occupiers, reduces the mean size of holdings to $5\frac{1}{2}$ acres.

"In West Flanders the number of persons engaged in husbandry is in the proportion of 20 to 100 acres. On the same extent in East Flanders forty-one are employed, whereas in England the proportion is only twelve. The average pay of the day labourer in East Flanders is 7s. a-week, for which he has to find food and lodging. In West Flanders it is 6s. 10d. Women, in the two provinces respectively, can earn 5s. 6d. and 4s. 6d. These figures are taken from the Government statistics published in 1856, subject to modification in consideration of the ten years which have elapsed.

"The average price of land was at that date in West Flanders 65l. per acre, and the average rent 1l. 8s.; in East Flanders the venal price was 70l. per acre, and the rent 1l. 12s. If we take the kingdom, we find the price was about 50l., and rental 1l. 8s. I ascertained that in the Pays de Waes both the venal and rental figure had increased about 20 per cent. during the last fifteen years.

"In describing the agricultural condition of Flanders, it is better to adopt the natural rather than the geographical division, viz., the *hautes terres*, or sands of the interior, and 'polders,' or alluvial soils of the littoral zone and the banks of the Scheldt. The *hautes terres* were originally barren heath, the soil being almost pure silica, and absolutely unproductive. This once howling wilderness is now, after the intense industry of fifty generations, the market garden of Europe.

"The *Pays de Waes*, which lies between Ghent and Antwerp is, perhaps, the

best type of Flanders, as it embraces both the alluvial and sandy land. Here extreme subdivision prevails, and spade husbandry is chiefly practised. In this region, too flat for subsoil drainage, superfluous waters are carried off by a system of open ditches. The fields, which vary in size from $1\frac{1}{2}$ to 6 acres, have all, by careful manipulation, been worked into convex platforms, the watershed being in the centre. The surface water finds its way into the surrounding ditches, which form a network of open drains covering the whole country, communicating with larger channels, and eventually with the Scheldt. In this system of drainage, which necessitates the parcelling out of the land into very small fields, and in the light friable nature of the soil, we find in some measure the origin of excessive subdivision and spade husbandry. Along the ditches and roads, Canada poplars are planted. They belong to the proprietors, and are valued at 1 fr. a-year. They do immense injury to the growing crops, and thus take the place of ground game with us. The tenant may plant willows or alders between the standards, and use the branches for firewood. Once planted the stool belongs to the landlord.

"Much has been said about the *spade husbandry* of Flanders. The Pays de Waes is, *par excellence*, its dominion, but it is far from being universally solely used, though in the light soils it is used universally as an auxiliary, and in the following admirable manner. Every seven years the farmer trenches his soil to the depth of 2 feet, in order that the juices of the manure, which during that period have percolated beyond the reach of the plough, may be brought again to the surface and utilised. This practice is enforced in leases and agreements. 'The spade is the peasant's gold mine' is an old proverb. Leases from three, six, to nine years are the rule throughout Belgium; tenancy-at-will is the exception. Notwithstanding the natural poverty of the greater part of the soil, the produce, owing to the industry of the peasant, is enormous.

"Here I must digress in order to remove a most erroneous impression which prevails in this country regarding the much vaunted *petite culture*—an impression which seems to have derived additional force from the error into which Mr. Stuart Mill and other writers have fallen, by quoting the Flemish peasant as an example of the small proprietor who tills his own soil. In Chapter 6 of the *Principles of Political Economy* (second edition, 1857), headed 'Peasant Proprietors,' Mr. Mill says, 'But the most decisive example in opposition to English prejudice against cultivation by peasant proprietors is to be found in Belgium.' He then in illustration quotes a long passage from Mr. McCullagh about the skill and industry of the Flemish peasant, and then says, 'Has this industry no connection with not paying rent? Could it exist without presupposing at least a virtually permanent tenure?'

"The following is the truth. Upwards of 80 per cent. of the fertile land in Flanders, though the property in fee of small proprietors, many of whom are peasants, is let in minute farms to a rack-rented but industrious tenantry; and when we consider that the remainder includes gardens, pleasure grounds, bleaching fields, certain lands in the possession of public companies, which though arable are not let for agricultural purposes, it may be fairly said that not much more than one-seventh is an example of what is commonly understood as *la petite culture*.

"But if Mr. Mill is incorrect in point of fact, he is absolutely in error in his deductions.

"The truth is that the figure of merit in husbandry, taking the seven provinces of Belgium, increases in a direct ratio with the area cultivated by tenants. If we take the three most fertile provinces, namely, the two Flanders and Brabant—we find 80 per cent. of the land in the hands of tenants. On the other hand, looking at Luxembourg, Namur, and Limbourg—the three worst cultivated provinces, the proportion is only 40 per cent. Luxembourg is of all provinces the most miserable, and there, if we take the gross area, we find that 9 per cent. only is let, and of the arable area, 26 per cent. These figures are taken from the highest authority.

"If I am right, either Mr. Mill conceives that the cultivation of a little over

15 per cent. of a rich country by peasant proprietors is sufficient ground for an argument in favour of the system; or, it remains for him to explain how, in a work written for the express purpose of bringing to the bar of public opinion peculiar views on a question of the highest importance, he could have appealed to such untrustworthy evidence.

"With regard to the tenant, there is really no country in Europe, far less Ireland, where his tenure is less secure. In the Pays de Waes, commonly called the 'Paradise of Belgium,' he holds at will, without even a written agreement, and is subject to summary eviction. In this district a very curious custom prevails. The little homesteads are generally the property of the tenant, who hires land to cultivate as near home as he can get it. The landlords are chiefly the wealthier peasants, attorneys, and people of their class. It is not uncommon to find a tenant holding from more than one landlord, who in his turn is also a tenant. Thus, though owing to the precarious tenure, and the custom of summary eviction, together with the leverage which the fixed residence of the tenant gives the landlord, oppression and tyranny are common, they find no compact forces to oppose them. The tenant who is harshly treated to-day, has a certain sympathy with the facilities which the law affords to rapacity, as to-morrow he may wish to avail himself of them in the management of his own little property hard by. The fact is, that in this district, as in other parts which are much subdivided, the passive acquiescence in landlord tyranny is due more to a common partnership in the right to tyrannise than to any absence of the abuse of power.

"The great authority, Arthur Young, says, 'Give a man secure possession of a bleak rock, and he will turn it into a garden.' In this I agree; but further on he says, 'Give a man a nine years' lease of a garden, and he will turn it into a desert.' This I dispute. The peasant tenant of Flanders is the descendant of a race of peasant proprietors who, by their skill and industry, have snatched hundreds of thousands of acres from the dominion of the sea, forged wealth out of pure silica, and converted a howling wilderness into a fruitful garden. The fruitful garden remains, but it has now, under the pressure of competition, to fulfil the threefold mission of land which has arrived at commercial value, viz., to provide rent for the landlord, profit for the tenant, and wages for the labourer. The peasant proprietor, cultivating his own land, has disappeared, and with him likewise security of tenure. The tendency of the law of testamentary division is not only to break up extensive estates, and root out the land monopolist, but also to keep continually forcing a large area into the market in small parcels, within the means of that very numerous class whose love of land amounts to a passion. As generations succeed each other, and population increases, and with it competition, the proprietor finding it impossible, without excessive labour, to extract from his land a fair return for his capital, and unable to resist the temptation of high offers, soon learns to prefer the ease and petty power of the landlord to the toil of the husbandman. The tenant enters rack-rented, and, with the dreaded rent day ever hanging over him, is obliged to sacrifice every other consideration to the cultivation of his land. His children, from their earliest years, having to take their share in the daily routine of labour and anxiety, grow up in complete ignorance, and the land, under the high pressure of intense industry, is clothed, fed, and adorned by a lavish use, or rather abuse, of the energies of the overwrought slaves who 'water it with their sweat.'

"Speaking of Flanders, M. de Laveleye, a very high authority, says:—

" 'Mais là aussi, nous avons été frappés du triste contraste que presentaient ces magnifiques récoltes et l'existence misérable de ceux qui les font naître.'

"And still further—

" 'Malheureusement la condition des hommes laborieux qui ont amené l'agriculture à un si haut degré de perfection n'est point en rapport avec la masse des produits qu'ils récoltent. L'ouvrier agricole de Flandres est peut-être celui de tous les ouvriers de l'Europe le plus mal nourri, le petit fermier ne vit guère mieux, et si l'on y regardait de près, on se convaincrait que loin de tirer du capital engagé dans son exploitation les 10 per cent. jugés nécessaires en Angleterre il n'en obtient pas 3 per cent. en sus du salaire qu'il mérite par son travail personnel.'

"My own experience on the spot has confirmed M. de Laveleye's opinion. I went to the garden of Belgium impressed with Mr. Mill's views, and prepared to find a paradise of agriculture resulting from a peasant proprietary. I found, for the most part, naturally miserable soil and marvellous fertility; a curious skill in husbandry and the most lamentable ignorance; complete stagnation without much absolute misery; and a swarm of small proprietors, possessing all the vices which too often characterise needy power, lording over and quarrelling with a rack-rented and oppressed tenantry.

"On more than one occasion Mr. Bright has foreshadowed a scheme to enable the tenants in Ireland to purchase land at present in the possession of large proprietors, and thus create a class of small landowners. I have already shown that by an economic law in countries under the statutes of the 'Code Civile,' the increase of competition does inevitably, as time rolls on, force the cultivation of the soil into the hands of tenants. In countries where our laws of succession obtain, the result, supposing a small proprietary created, would be exactly the same, only on a different scale. The land would gradually fall back into the hands of capitalists who desire to possess large estates, on which to establish themselves and their families in a manner suited to their wealth and the position in society which they have either attained or coveted. They also would certainly let their land, but in large holdings, partly on account of economy of management and maintenance, and partly in order to attract farmers possessed of capital.

"I confess I cannot see how any empirical scheme for creating a class of small proprietors would succeed; in time, I feel sure that the laws which seem to regulate the distribution of land, as soon as there is a demand for it, would inevitably assert themselves.

"In the meantime I think that, in Flanders at least, it is evident that the laws of compulsory division, though they may have equalised the relative wealth and power of landlords and tenants, have failed in producing kindlier relations, and greater prosperity generally."

V.—Valuation of Merchant Sailing Vessels.

THE following tables, showing the actual or approximate values *per ton of fifty sailing vessels (excluding steamers)*, underwritten during the year 1869, as given at the time of the risks being taken, have been contributed by Henry Jeula, F.S.S., Honorary Secretary Statistical Committee of Lloyd's:—

I.—Valuation on Different Materials of which Built.

Materials of which Built.	Number.	Tonnage.	Value.	Value per Ton on the Whole.	Average Value per Ship per Ton.
			£	£	£
Wooden vessels	23	19,794	197,400	9'97	11'14
Iron „	16	13,800	198,000	14'35	14'76
Composite „	11	10,088	162,800	16'09	16'23
Total.....	50	43,682	557,700	12'77	13'42

II.—Valuation on Different Ages of the Vessels.

Intervals of Five Years (about).	Number.	Tonnage.	Value.	Value per Ton on the Whole.	Average Value per Ship per Ton.
<i>Vessels Built between—</i>			£	£	£
1854 and 1859 inclusive	8	7,997	62,500	7'82	9'06
'60 " '64 "	15	13,296	151,400	11'39	12'12
'65 " '69 "	27	22,889	343,800	15'36	15'43
Total	50	43,682	557,700	12'77	13'42

III.—Valuation on Different Original Classification.

Original Classification.	Number.	Tonnage.	Value.	Value per Ton on the Whole.	Average Value per Ship per Ton.
			£	£	£
Unknown	2	4,396	24,000	5'46	5'53
7 years, A 1	6	4,626	37,900	8'19	10'19
9 "	4	2,718	33,500	12'33	11'66
10 "	3	2,490	25,000	10'04	10'18
11 "	1	445	5,000	11'24	11'24
12 "	3	2,574	30,000	11'66	12'24
13 "	4	2,605	33,000	12'67	12'21
14 "	8	7,509	115,000	15'31	15'51
16 "	5	4,249	72,300	17'02	16'92
A 1	13	11,337	170,000	15'00	15'35
A 1	1	733	12,000	16'37	16'37
Total	50	43,682	557,700	12'77	13'42

VI.—Irish Agricultural Holdings.

FROM the *Pall Mall Gazette* :—

"The paper on Irish agricultural holdings laid before both Houses of Parliament this week contains a number of interesting particulars capable of succinct arrangement. Nearly *five-sixths* of the holdings in Ireland—512,000 out of 682,000—are of less value than 15*l.* a-year each. The following is a list of the holdings according to value :—

" Number of holdings valued under 15 <i>l.</i>	512,080
" " at 15 <i>l.</i> and under 30 <i>l.</i>	94,098
" " 30 <i>l.</i> " 50 <i>l.</i>	38,534
" " 50 <i>l.</i> " 100 <i>l.</i>	24,857
" " 100 <i>l.</i> and upwards	12,668

Total for Ireland 682,237

"Nearly five-sixths also of the holdings—527,000 out of 682,000—are tenancies at will.

"The nature of the tenure in all cases is shown in the following table:—

1. Tenancy at will.....	526,539
2. Lease for 21 years, or any less term	25,406
3. " exceeding 21 and under 31 years.....	22,217
4. " " 31 " 60 "	4,312
5. " " 60 " 99 "	5,497
6. " " 99 years.....	3,903
7. " for lives	28,339
8. " " alternative	30,880
9. " " renewable for ever	4,540
10. Perpetuity.....	10,298
Total of classes 1 to 10	661,931
11. Holdings in occupation of proprietors in fee	20,217
Grand total	682,237*

"The tenancies at will decrease largely in proportion to the aggregate number of holdings, as the latter increase in yearly value:—

	Total Number.	Whereof were Tenancies at Will.
Holdings under 15 <i>l.</i>	512,080	428,935
" at 15 <i>l.</i> and under 30 <i>l.</i>	94,098	63,154
" " 30 <i>l.</i> " 50 <i>l.</i>	38,534	21,129
" " 50 <i>l.</i> " 100 <i>l.</i>	24,857	10,230
" " 100 <i>l.</i> and upwards	12,668	3,091

"The percentage of tenancies at will under 15*l.* to the total number of holdings at the same value is 84; at 15*l.* and under 30*l.* it is 67; at 30*l.* and under 50*l.* it is 55; at 50*l.* and under 100*l.* it is 41; and at 100*l.* and upwards it is 24 only. Here, then, it is manifest that the poorer class of tenants is in a greater degree dependent upon the landlords than the more opulent class.

"These statistics were collected by the Irish Poor Law Office. The 'value,' we presume, is the sum at which the holdings are assessed for poor-rate purposes, and which is an entirely different thing from the rental. On this point it may be well to bear in mind the statement recently made by Dr. Neilson Hancock, that 'in the northern counties (of Ireland), where the valuation has been comparatively recent, it is believed to be within 20 per cent. of the fair letting value of land on good estates, not including the interest of yearly tenants or buildings; while in the south, where no alteration has been made in the basis adopted in the valuation made during the period following the famine of 1846-47, when the poor-rates were high and the state of agriculture depressed, the valuation is believed to be still more below the letting value.'"

VII.—*The Wages of Irish Farm Labourers.*

THE statistical portions of two articles which appeared in the *Pall Mall Gazette*, under the above title, during March, are here extracted.

* Inclusive of eighty-nine holdings in regard to which information was refused.

The same subject will be found treated at some length in vol. xxv of the *Journal*, 1862.

"The answers obtained from their inspectors by the Irish Poor Law Commissioners to three very specific questions as to the present condition of the agricultural labourers are now before us. The Commissioners sought to know—Firstly, 'What has been the increase in the wages of the agricultural labourer generally in Ireland during the last twenty years?' secondly, 'What is about the present rate of wages of an agricultural labourer if employed (a) by the week or longer period, or (b) if employed by the day?' and, thirdly—(this is notable)—'Are the agricultural labourers as a class contented?' With regard to the first question, Dr. King, the inspector for county Cork and part of the counties of Limerick and Waterford, reports that wages since 1849 have gradually advanced to their present state, which is 'fully double' what it was twenty years ago. Dr. King attributes the rise to emigration; to the diminished use of the potato: 'they (the labourers) have now to buy bread, and they have no refuse upon which they can feed a pig or fowl, and consequently have no benefit from the sale of a pig, fowl, or eggs'—the rise is also to be accounted for by the 'diminished value of money.' This fall in the value of money, we may observe, is yet a moot point with many able economists. The wages by the week are from 7s. to 10s. without food; from 3s. to 6s. with food—'two meals a-day for six days in the week.' It is significant of spare living that in most returns about the diet of the labouring classes in Ireland it is common to note the number of meals per diem a family or an individual has. Day wages vary from 1s. to 2s. 6d., and even to 4s.; but the higher wages are only paid to mowers and reapers in harvest time, when there is a great demand for labour. When the labourer resides with his employer he has from 8l. to 10l. a-year and food. These in-door farm servants are, it appears from other reports, usually single young men. Day wages are a convenience in Ireland, where so many of the cottiers spend their time alternately on their own holdings and on the farmers' land.

"Dr. Knox, reporting from unions in county Antrim, parts of the counties of Armagh, Down, Londonderry, and Tyrone, considers the advance to be 50 per cent., 'showing an advance from 1s. to 1s. 6d. per day, or more near the vicinity of the principal towns. Unmarried men very generally receive board and lodging in the houses of their masters, in addition to which they receive a money payment varying from 5l. to 9l. or 10l. for the half year, which is the customary period of their engagement.'

"Mr. Robinson, speaking of counties Dublin and Wicklow, and parts of counties Carlow, Kildare, Kilkenny, Meath, Queen's County, and Wexford, says that the labourer who does not receive diet gets by the day, 1s. 4d.; by the week, 7s. 6d.; with diet, 4s. per week. The wages are 50 per cent. higher than in 1850. Harvest wages are much higher. At that season labourers have had 3s. 6d. a-day.

"Mr. O'Brien, who has charge of unions in county Louth and parts of the counties of Armagh, Cavan, Down, Dublin, Fermanagh, Meath, Monaghan, and Tyrone, reports the average advance in wages to be 50 per cent. By the week the labourer is paid from 6s. to 9s. or 10s., by the day from 1s. to 2s., according to the season, 'without food.' When food is given the wages are from 8d. to 10d. or 1s. a-day. The average payment to in-door farm labourers has doubled within the last twenty years, 'while their diet and general treatment have also undergone a considerable improvement during the same period.'

"Dr. Hill, whose district comprises parts of the counties of Cavan, Dublin,

Kildare, King's County, Longford, Meath, Queen's County, Roscommon, and Westmeath, reports the rise in wages to range, according to locality, from 25 to 100 per cent., the great majority of cases being 50 per cent. Without maintenance the weekly wages vary from 6*s.* to 8*s.*, and the daily wages from 1*s.* to 1*s.* 6*d.* In-door farm servants average 8*l.* a-year; harvest wages 2*s.* 6*d.* to 3*s.* or 3*s.* 6*d.* a-day.

"Mr. Richard Hamilton, whose duties extend over the county of Donegal and portions of the counties of Cavan, Fermanagh, Londonderry, Monaghan, and Tyrone, states that the in-door farm servants' wages have doubled in twenty years, and those of the out-door labourers have risen 50 per cent. The rate of wages for 'men in constant employment varies from 1*s.* to 1*s.* 6*d.* a-day the whole year round.' Casual labourers from 1*s.* 3*d.* to 2*s.* 6*d.* a-day. In-door farm servants from 10*l.* to 15*l.* a-year.

"Mr. Bourke's district runs into the counties of Clare, Galway, Kerry, King's County, Limerick, and Queen's County. He remarks that the increase of agricultural wages, compared with the payments twenty years ago, ranges from 40 to 60 per cent. Wages now vary from 7*s.* to 8*s.* a-week; the lower payments in the grazing districts. The ordinary rate of day wages is 1*s.* 6*d.* to 2*s.* During turf-cutting and harvest the wages rise to 2*s.* 6*d.* and 3*s.* a-day with a mid-day meal, or 3*s.* 6*d.* without it.

"Mr. Horsley has a district which comprises parts of the counties of Cork, Kerry, and Limerick. This gentleman reports that within the last twenty years wages have fully doubled throughout his district. He thinks 'there is a likelihood of a still further enhancement of the labourers' improved condition in this direction, as the drain by emigration from this country of able-bodied labour still continues, and is gradually disposing of any superabundant supply, and in some localities is producing a scarcity.' Wages, 8*s.* to 10*s.* a-week, without food; in-door farm servants, 12*l.* to 14*l.* Mr. Horsley remarks that this class of labourers 'often take service by the quarter, refusing to engage for a longer period.' Day labourers, 1*s.* 4*d.* to 1*s.* 6*d.*, without food; at seed time and harvest wages range from 1*s.* 6*d.* to 2*s.* daily, with two full meals.

"Mr. W. J. Hamilton is the inspector of Poor Law unions in the county of Waterford and parts of the counties of Carlow, Cork, Kilkenny, Limerick, Tipperary, and Wexford. This officer states that the rise in agricultural wages in his district since 1849 has been nearly 80 per cent. The present average rate of in-door farm servants, with diet, is 10*l.* 6*s.* a-year; by the week, with diet, 5*s.*, without diet, 7*s.* 6*d.* Engaged by the day, without food, 1*s.* 5*d.* The daily labourers have frequently employment nine months out of the twelve.

"The inspector for the district which comprises parts of the counties of Cavan, Clare, Galway, King's County, Leitrim, Mayo, Roscommon, Sligo, and Tipperary, says with some confidence that the rate of wages 'is about double what it was twenty years ago.' A good labourer in regular employment now earns about 6*s.* a-week; a casual labourer gets from 1*s.* 6*d.* to 2*s.* a-day 'during the pressure of spring and harvest work, and very often diet in addition.'

"The last report that we are called upon to notice is that of Dr. Roughan, the inspector of unions which lie in portions of the counties of Galway, Mayo, Leitrim, Roscommon, and Sligo. This officer states that the wages have doubled since 1849, and 'that the present rate of wages for labourers by the week is 5*s.* during the months of November, December, January, and February. In the hurried times of the spring and harvest months the rate of wages is increased to 12*s.*, and in some instances 14*s.* per week. Labourers who are engaged by the quarter or by the

year, and who are called farm servants, receive from 8*l.* to 10*l.* a-year, together with maintenance and lodging.' And further, 'that the daily rate of wages of labourers during the months of November, December, January, and the early part of February, is from 10*d.* to 1*s.*, in the spring and autumnal months from 2*s.* to 2*s.* 6*d.*, and in portions of the county Sligo 3*s.*; mowers receive from 2*s.* 6*d.* to 3*s.* 6*d.* a-day, with diet.' * * *

"Though the wages of the Irish labourer have greatly advanced since 1849-50, his command over the necessaries of life has not proportionately increased, in consequence of the higher prices of food and clothing. Thus, comparing the contract prices of certain articles supplied to the Kells union (county Meath) in the earlier half of 1850 with the corresponding period of the present year, it is shown that the 4*lb.* loaf of white bread has risen from 4½*d.* to 6½*d.*; brown bread, from 3½*d.* to 5½*d.*; oatmeal, from 10*l.* to 15*l.* 10*s.* per ton; sweet milk, from 5½*d.* to 9*d.* per gallon; Indian meal, 7*l.* 10*s.* to 8*l.* 7*s.* 6*d.* per ton; beef, 4*d.* to 7*d.* per *lb.* Of the materials for clothing, we select grey calico, which, from 4*d.* per yard in 1850, has now reached 6*d.*; check, from 6*d.* to 9½*d.* per yard; frieze, from 2*s.* 2*d.* to 3*s.* 9*d.* per yard; and corduroy from 1*s.* to 1*s.* 10*d.* per yard. Nevertheless, it is affirmed that the rise in the price of commodities which the labourer usually consumes is not equal to the increase of his wages." * * *

The price of articles which the labourer consumes is a necessary element in arriving at any conclusion from time to time as to his real economic condition; we, therefore, append the full official table from which the writer above has made certain quotations—

Contract Prices of Articles of Workhouse Consumption for the Half-Years ended 25th March, 1850 and 1870, in the Kells Union.

Names of Articles.	Prices on 25th March, 1850.			Prices to 25th March, 1870.		
	£	s.	d.	£	s.	d.
White breadper 4-lbs.	—	—	4½	—	—	6½*
Brown „ „	—	—	3½	—	—	5½*
Oatmeal per ton	10	—	—	15	10	—
Indian meal „	7	10	—	8	7	6
Rice „	12	14	6	15	—	—
Sweet milk per gal.	—	—	5½	—	—	9
Buttermilk „	—	—	2½	—	—	2½
Beef per lb.	—	—	4	—	—	7
Black tea..... „	—	3	6	—	2	10
Soft sugar „	—	—	5	—	—	4½
Whisky per gal.	—	7	—	—	17	4
Soap..... per cwt.	1	2	—	1	3	6
Candles per lb.	—	—	6½	—	—	7
Coal per ton	—	19	—	1	—	—
Oat straw per cwt.	—	—	7	—	3	—
Blankets per lb.	—	1	6	—	1	9
Rugs each	—	1	6	—	2	6
Grey calico per yard	—	—	4	—	—	6
Flannel „	—	—	10½	—	1	—
Check „	—	—	6	—	—	9½
Frieze „	—	2	2	—	3	9
Corduroy..... „	—	1	—	—	1	10
Butt leather per lb.	—	—	9½	—	1	3
Kip „ „	—	1	4½	—	2	2

* The bread is now made in the workhouse.

It is curious that potatoes are omitted from this table, but the work-house contract price is given for another district as 5*d.* per stone in 1849 and 6*d.* in 1869.

VIII.—*Wages and Work, Carpenters and Joiners, in Towns in Scotland, 1869.*

THE following list appears in the Eighth Annual Report of the Associated Carpenters and Joiners of Scotland :—

	Hours.	Wages.		Hours.	Wages.
Aberdeen	57	22 <i>s.</i> per week	Greenock	57	house, 6 <i>d.</i> per hour
Airdrie	57	26 <i>s.</i> "	Hamilton	57	ship, 26 <i>s.</i> to 28 <i>s.</i>
Alexandria	57	27 <i>s.</i> to 30 <i>s.</i>	Hawick	57	5½ <i>d.</i> per hour
Alloa, house	57	4½ <i>d.</i> per hour			5 <i>d.</i> "
" boats	60		Inverness	57	4½ <i>d.</i> to 5 <i>d.</i> per hour
Arbroath	57	21 <i>s.</i> to 22 <i>s.</i>	Johnstone	60	25 <i>s.</i> to 26 <i>s.</i>
Ayr	57	5½ <i>d.</i> per hour	Kilmarnock	57-58	23 <i>s.</i> to 25 <i>s.</i>
Blairgowrie	51	19 <i>s.</i> to 23 <i>s.</i>	Kirkcaldy	57	4½ <i>d.</i> per hour
Bonnyrigg	56	5½ <i>d.</i> per hour	Kirkcudbright ..	57	20 <i>s.</i> per week
Broughty Ferry ..	51	5 <i>d.</i> and 5½ <i>d.</i> per hour	Lanark	57	22 <i>s.</i> "
Campbeltown	60	24 <i>s.</i> per week	Leith	51	6 <i>d.</i> per hour
Castle Douglas ..	60	20 <i>s.</i> "	Montrose	57	21 <i>s.</i> per week
Clyde	57	28 <i>s.</i> to 29 <i>s.</i>	Musselburgh	51-57	5 <i>d.</i> to 6 <i>d.</i> pr. hr.
Coatbridge	57	per 60 hours	Nairn	57	19 <i>s.</i> to 20 <i>s.</i>
Crieff	57	5½ <i>d.</i> per hour			
		20 <i>s.</i> to 21 <i>s.</i>	Oban	57	5½ <i>d.</i> per hour
Dalkeith	51	5½ <i>d.</i> per hour	Paisley	57	6 <i>d.</i> "
Dumfries	57	5½ <i>d.</i> "	Partick	57	5½ <i>d.</i> to 6 <i>d.</i> per hour
Dumbarton	60	26 <i>s.</i> to 27 <i>s.</i>	Perth	57	23 <i>s.</i> 9 <i>d.</i> to 24 <i>s.</i>
Dunfermline	57	5½ <i>d.</i> per hour	Port-Glasgow ..	57-60	24 <i>s.</i> to 28 <i>s.</i>
Dundee	51	24 <i>s.</i> to 25 <i>s.</i> 6 <i>d.</i>	Portobello	51	5½ <i>d.</i> to 6 <i>d.</i> per hour
Dunfermline	57	20 <i>s.</i> per week			
Dunoon	57	6½ <i>d.</i> per hour	Renfrew	57-60	26 <i>s.</i> to 27 <i>s.</i>
			Rothsary	57	5½ <i>d.</i> per hour
Edinburgh	51	6 <i>d.</i> to 6½ <i>d.</i> per hour			
Elgin	57	4½ <i>d.</i> per hour	St. Andrews	57	4½ <i>d.</i> to 5 <i>d.</i> per hour
Falkirk	57	5 <i>d.</i> "	Stirling	57	5 <i>d.</i> per hour
Forfar	57	20 <i>s.</i> to 21 <i>s.</i>	Tayport	57	22 <i>s.</i> per week
Forres	57	18 <i>s.</i> to 20 <i>s.</i>	Uddingston	57-60	26 <i>s.</i> to 28 <i>s.</i>
Galaahiels	57	5½ <i>d.</i> per hour	Wishaw	60	25 <i>s.</i> per week
Glasgow	57	6 <i>d.</i> "			
Govan	57	27 <i>s.</i> per week			

IX.—*Book Publishing in 1869.*

THE *Publishers' Circular* says :—

"A statistical view of the publishing trade during 1869 may not inappropriately bring to a close this portion of our present number. During that period our

columns have given the full transcript of title-pages, with size, price, publishers' names, and number of pages, of 5,136 books. This gross number includes 770 of mere re-entries for changes of price; and 397 imported new books from America; leaving a total of new books and new editions published in Great Britain from 1st January to 30th December, 1869, of 4,569.

"It is worthy of note the large numbers of *new editions* that have appeared during the year, three-tenths or nearly one-third of the whole; demonstrating towards one of two conclusions, either that publishers are now more scrupulous in distinguishing their reprints, or else that there are really more successful books published than we had believed in.

"It may be interesting to give a summary in months of issue, as showing the variations of periodical pressure on the literary market:—

	New Books.	New Editions.	American Importations.		New Books.	New Editions.	American Importations.
January	219	76	40	August	243	102	30
February.....	166	72	39	September	160	89	32
March	109	185	30	October	378	144	27
April	223	118	21	November	354	125	28
May	313	117	51	December	460	117	24
June	218	104	35				
July	210	70	40		3,253	1,319	397

making the total during the twelve months of 4,569 new books and new editions.

"A classification of the subjects of these works gives, as last year, one-fourth to—

Theology, viz.	1,047	Travel and geographical re- search	288
Education, philology, and } classical literature..... }	478	History and biography	292
Juvenile works	500	Poetry and the drama	274
Novels and other works of fiction	461	Year books and bound volumes of serials	236
Law	142	Medicine and surgery	160
Political and social economy, } and trade and commerce	324	Miscellaneous	402
Arts and sciences and fine art } books	341		<u>4,569</u>

X.—Agricultural Statistics, British (1869) and Foreign.

THE summary of the returns for the United Kingdom, arranged topographically, will be found at pp. 187—193. The official publication of these statistics is prefaced by a report from the pen of Mr. A. Fonblanque, of so comprehensive and useful a character, that it has been thought desirable to reprint it here *in extenso*:—

Publication of Summary of Returns.

The summary of the general results of the returns was published in the London newspapers upon the 20th of September last, and the public were thus informed of the acreage of the principal crops and of the number of the live stock before the harvest was concluded. The period at which these results can be made public must depend upon the promptitude with which the forms are filled in and returned by the occupiers of land to the officers appointed to collect the returns.

Plan of Collecting Returns.

By the plan of sending to the residence of each occupier of land a blank form, stamped for free transmission by post, means are afforded for the prompt collection of accurate information respecting the agriculture of the country. And it would be difficult to devise a system attended with less trouble and inconvenience to the farmers.

In Scotland and Wales there may be said to be no opposition to the returns, a proof of the correctness of Mr. Hall Maxwell's statement, in 1856, that—"The farmers of Scotland have practically satisfied themselves that the inquiry is in no respect inquisitorial, and that it cannot possibly divulge or compromise individual interests. They appreciate with intelligence the importance of statistical information."

There are still unfortunately not a few occupiers of land in parts of England who refuse to make returns, and this opposition increases the cost of, and protracts the collection of the information. But perseverance in the system of voluntary returns, with estimates in cases where information is refused, will probably, in the end, and that in no great length of time, afford as satisfactory results as could be obtained under penalty by act of Parliament.

Number of Returns Obtained.

The number of returns obtained from occupiers of land in Great Britain is larger in 1869 than in 1868. The increase is chiefly caused by information having been obtained in 1869 from a larger number of occupiers of small holdings, in consequence of more precise instructions for the collection of the returns. In 1868 returns were required from "holdings of more than small pieces of garden ground," but in 1869 the returns required were from "holdings of and above one quarter of an acre."

The additional number of returns obtained in 1869, being chiefly from holdings of very small extent, will not account for any considerable portion of the increase in the total acreage returned in 1869 as compared with 1868. The larger part of the increase is due to more complete and accurate returns by occupiers of land in some districts; but the cultivated area is also increasing by the reclamation of waste lands.

Heading Titles in Forms for Collecting Returns.

As regards the forms used for collecting the returns, there is difficulty in wording some of the headings of columns, so that they may be taken to mean the same thing by farmers in all parts of England, Wales, and Scotland. Doubts have been expressed as to the land that should be returned under bare fallow, and also as to the distinction to be made between land under grass for some seasons only and that which is in permanent pasture.

With the object of lessening the chances of want of uniformity in entering land under these distinctions, the following changes in the headings of columns were made in the forms issued for collecting the returns in 1869: "bare fallow or uncropped arable land" was altered to "bare fallow or ploughed land from which a crop will not be taken this year;" and "clover and artificial and other grasses under rotation," to "clover, sanfoin, seeds, and rye grass under rotation." These alterations will account for a large portion of the reduction in the acreage returned as under fallow, and as under clover, &c., in 1869.

Abstract Returns for United Kingdom.

In the first two tables, abstract returns are given for each division of the United Kingdom; the figures for Ireland having been furnished by the Registrar-General for Ireland. The figures for the Isle of Man and the Channel Islands, in these and other tables, have been specially collected for the Board of Trade, as upon previous occasions, under the direction of the local authorities.

For the United Kingdom the total number of acres returned as under all kinds of crops, bare fallow, and grass, was 46,100,153 in 1869, against 45,652,545 in 1868, showing a difference in favour of 1869 of 447,608 acres.

Of the total acreage returned in 1869, there were under corn crops (including beans and peas) 12,000,111 acres, of which 9,758,037 were in Great Britain, and 2,207,970 in Ireland; under green crops (including potatoes), there were 5,065,933 acres, of which 3,575,067 were in Great Britain, and 1,468,895 in Ireland; under bare fallow there were 761,369 acres, of which 738,836 were in Great Britain, and 20,981 for Ireland; and under grass, there were of clover and other grasses from seed, 5,149,552 acres, of which 3,448,726 were in Great Britain, and 1,669,800 in Ireland, and of permanent pasture there were 22,811,284 acres, of which Great Britain had 12,735,897 and Ireland 10,046,877 acres.

Acreage under each Kind of Corn Crop.

The acreage under corn crops as returned in 1869, was divided between the different kinds of crops in the following manner: in Great Britain, of the total number of 9,758,037 acres devoted to corn crops, 3,688,357 acres, or nearly 38 per cent., were under wheat; 2,251,480 acres, or 23 per cent., were under barley or bere; 2,782,720 acres, or 28 per cent., were under oats; 64,099 acres, or 0·6 per cent., were under rye; 575,204 acres, or nearly 6 per cent., were under beans; and 396,177 acres, or 4 per cent., were under peas.

"In Ireland, the land under corn crops was very differently apportioned. Of a total of 2,207,970 acres, wheat was grown upon 218,117 acres, or to the extent of about 13 per cent.; barley upon 223,338 acres, or 10 per cent.; oats occupied as many as 1,684,788 acres, or 76 per cent.; and rye, beans, and peas together only amounted to 18,727 acres, or barely 1 per cent. of the land under corn. Although so large a difference is shown between the proportionate acreage under corn crops in Great Britain and Ireland, the percentage proportions for the principal crops will be found not to differ very much in Ireland and Scotland."

Acreage under each Kind of Green Crop.

As regards green crops, the following are the results for each kind of crop in 1869:—in Great Britain, of a total of 3,575,067 acres, 585,211, or 16 per cent., were returned as under potatoes; 2,171,526, or 60 per cent., as under turnips and swedes; 292,742, or 8 per cent., as under mangolds; 14,344, or 0·4 per cent., as under carrots; 14,525, or 4 per cent., as under cabbages, kohlrabi, and rape; and 365,993, or 10 per cent., as under vetches, lucerne, and any other green crop, except clover or grass.

In Ireland, of the total of 1,468,895 acres under green crops in 1869, 1,041,837, or 71 per cent., were under potatoes; and 321,880, or 22 per cent., were under turnips and swedes.

Comparison of Acreage under Corn Crops in 1869, and in the Two Previous Years.

Upon comparing the returns of 1869 with those of 1868, the total acreage under

corn crops in Great Britain shows an increase of 324,505 acres, and as compared with 1867, the increase in 1869 is as much as 473,257 acres. The cultivation of corn crops, as shown by the returns, has been extended in each of the two years since 1867, the result, no doubt of the higher prices of corn in 1867 and 1868.

The acreage under wheat in Great Britain shows an advance in 1869 over 1868 of 36,232 acres, but in 1868 there was an increase of 284,249 acres over 1867. Barley shows an increase in 1869 against 1868 of 100,000 acres, which is only a recovery of the decrease in 1868 as compared with 1867. Oats have not varied much in acreage in the last three years, but in 1869 there is an increase over 1868 to the extent of 25,000 acres. Beans had a larger acreage in 1869 than in 1868 by 45,000 acres, and it was in excess of the acreage under that crop in 1867. Peas were grown upon 100,000 more acres in 1869 than in 1868, and although the acreage under peas was smaller in 1868 than in 1867, the acreage in 1869 is much above that in 1867.

In Ireland in 1869, as compared with 1868, there was a small decrease in the acreage under wheat; an increase of 35,000 acres in barley; and a decrease of 15,000 acres in oats.

Comparison of Acreage under Green Crops in 1869, and in the Two Previous Years.

The green crops in Great Britain occupied a larger total acreage in 1869 than in 1868 by 189,000 acres, and by 76,000 acres than in 1867. There is an increase in the acreage under each kind of green crop in 1869. Potatoes were more largely grown than in the two previous years; the increase of acreage in 1869 being 43,000 acres over 1868, and as much as 93,000 acres over 1867. But the acreage under potatoes in Great Britain is still only a little more than one-half of the extent of the land devoted to that crop in Ireland.

As regards turnips and swedes, the acreage has varied but little in the last three years. In 1869 there is an increase over 1868 of 6,000 acres, but the total is below what it was in 1867.

The cultivation of mangolds increased largely in 1869; there was an increase of 43,000 acres over 1868, and over 1867 the smaller, though still considerable, addition of 34,000 acres. The acreage under carrots is small, and the fluctuations from year to year are not important. The crops of cabbages, kohl-rabi, and rape are classed together, and show a larger acreage in 1869 than in 1868 by 30,000 acres, but over 1867 the increase is not more than 11,000 acres. The acreage under vetches, lucerne, and any other green crop, except clover or grass, in 1869, is larger than in 1868 by 64,000 acres, but it is below the acreage in 1867 by 58,000 acres. Vetches or tares are the most largely cultivated of this class of crops, and the acreage under them was greater by 48,000 acres in 1869 than in 1868.

Comparison of Acreage under Flax in 1869, and in the Two Previous Years.

The acreage under potatoes and other green crops in Ireland in 1869 differs but to a small extent from what it was in 1868.

The other crops to be noticed are flax and hops. In Great Britain 20,923 acres were returned as under flax in 1869 against 17,543 acres in 1868. This crop is chiefly grown in England, the acreage under flax in Wales and Scotland being but small. In every county in England some acres of land are returned as under flax; but it is only in the counties of York, Lincoln, Suffolk, Norfolk, Cambridge, Somerset, and Dorset, that the acreage of the crop was above or about 1,000 acres

in 1869. Flax is not nearly so extensively cultivated in Great Britain as in Ireland, where 229,000 acres were under that crop in 1869.

Comparison of Acreage under Hops in 1869, and in the Two Previous Years.

The acreage under hops in England, to which division of the kingdom the cultivation may be said to be confined, is returned in 1869 at 61,785 acres against 64,455 acres in 1868, the decrease being attributed to the prevalence of low prices for hops. About two-thirds of the acreage under hops is in the county of Kent. The other counties in which hops are planted to any extent are Sussex, Hereford, Worcester, Hants, and Surrey.

Comparison of Land under Bare Fallow in 1869, and in the Two Previous Years.

The quantity of land under bare fallow in Great Britain in 1869 is less by 220,000 acres than it was in 1868. The decrease is greatly owing to more correct returns of the land which should properly come under this denomination. The alteration to obtain this object, made in the heading of the columns for bare fallow in the forms for collecting the returns of 1869, has been previously explained. In Devonshire the decrease in the acreage returned under bare fallow is exceptionally large, and the increase in permanent pasture in that county shows that the land has been more correctly classified. But the increase in the acreage under corn crops in 1869 also contributed to diminish the quantity of fallow land. The quantity of arable land annually allowed a season of rest is a point of much interest in connexion with the drainage of land and the rotation of crops as practised in different parts of the country.

Comparison of the Acreage under Grass in 1869, and in the Two Previous Years.

The variation in the acreage under grass remains to be noticed. There is a large decrease in 1869 as compared with 1868 in the number of acres in grass under rotation, amounting to 511,000 acres for Great Britain, and it is even larger in comparison with 1867. A part of this difference is owing, as in the instance of bare fallow, to more correct classification, which led to the transfer to "permanent pasture" of land, which in previous returns was entered as "grass under rotation;" but the failure of the clover plant in the dry summer of 1868, caused a large diminution in the acreage of grass under rotation in 1869.

The acreage under permanent pasture in Great Britain shows an increase in 1869 of 599,000 acres over 1868, and of 762,000 acres over 1867. This increase is more than sufficient to make up for the decrease in the acreage of grass under rotation. In some of the grass districts permanent pasture has been more fully returned in 1869, and it has also been increased by the reclamation of mountain and other waste lands.

Returns of the Number of Live Stock, Number of Horses included for the first time.

With respect to the returns of the number of live stock in 1869, it may be observed, that as regards Great Britain the number of horses is for the first time included. Horses have always been returned in Ireland, and were also included in the agricultural returns formerly collected in Scotland; but they have been omitted from the returns collected in Great Britain until 1869, when it was considered that

the interest so generally taken in the available supply of horses, and their importance as farming stock, rendered it unadvisable any longer to exclude them.

At present the number of horses in Great Britain has only been ascertained so far as they are in the possession of occupiers of land. The total number so returned upon the 25th of June, 1869, was 1,461,000. It is estimated that there may have been at the same date an additional number of 500,000 horses in the metropolis and other towns. The total number of horses in Great Britain would thus amount to about 2,000,000. The number of horses returned for the town and country districts in Ireland in 1869 was 527,000.

Comparison of Number of Live Stock in 1869, and in the Two Previous Years.

As regards the live stock used for food, there was a decrease in the number returned in Great Britain in 1869. The number of cattle and sheep was reduced, owing to the failure in 1868 of turnips and other descriptions of autumn and winter food. The number of pigs was greatly lessened, chiefly in consequence of the continued dearth of corn, but in some parts of the country there were losses from disease in the winter of 1868. Cattle show a reduction in Great Britain of 110,000 in 1869 as compared with 1868, but the number in 1869 is 320,000 above the number of 1867. In Ireland the number of cattle increased in 1869 over 1868, in which year there was a decrease from 1867.

The number of sheep in Great Britain is less by 1,173,000 in 1869 than in 1868, but the number in 1869 is larger by 619,000 than it was in 1867. In Ireland there were 174,000 fewer sheep in 1869 than in 1868. The difference in the relative number of sheep and cattle in Great Britain and Ireland is very great. To every head of cattle there are in Great Britain about $5\frac{1}{2}$ sheep, and in Ireland $1\frac{1}{2}$ sheep. Cattle are, however, kept in larger numbers in Ireland, in proportion to the acreage, than in Great Britain.

The decrease in the number of pigs in Great Britain is 378,000 in 1869 as compared with 1868. There was a much larger falling off in 1868 as compared with 1867. The difference between 1869 and 1867 is rather more than one million, which is equivalent to a diminution of 35 per cent. in the number of pigs in Great Britain in two years. The number of pigs kept in towns, and by cottagers having less than one quarter of an acre of land, are not included in the returns for Great Britain.

There is an increase of 217,000 pigs in Ireland in 1869 as compared with 1868, but that is not equal to the decrease in 1868 as compared with 1867. Pigs are generally supposed to be very numerous in Ireland, but the average number to every 100 acres of occupied land differs but little in Ireland from what it is in Great Britain.

The return of cattle, sheep, and pigs, taken as they are in the month of June, which is generally considered to be the best period of the year for collecting agricultural returns, show a supply for food short of the actual quantity. The number of calves, lambs, and pigs, born and killed for consumption between the time of collecting the returns from year to year is not ascertained, and as regards lambs and pigs the number not accounted for is probably considerable.

Comparative Results of Returns for Counties, arranged in Grazing and Corn Districts.

A comparative table of some of the chief results of the agricultural returns for the counties of England when divided into grazing and corn districts was compiled

and published with the returns for 1868. A similarly arranged table, but in greater detail, has been prepared for 1869.

The total acreage returned for counties in the two divisions is so nearly equal in quantity that, of the total acreage returned for all England, $52\frac{1}{2}$ per cent. is in the grazing or western division, and $47\frac{1}{2}$ per cent. in the corn or eastern division, but the differences in the agricultural condition of the two divisions are very marked.

Thus, of the total acreage in the grazing division, 25 per cent. is under corn crops, against 43 per cent. in the corn division. Green crops occupy 9 per cent. of the total acreage in the grazing, and 14 per cent. in the corn division. The land returned as under bare fallow in England is nearly equally divided between the two divisions. But the proportion of fallow to the total acreage, less the permanent pasture, or to the acreage of arable land in each division, is 5.5 per cent. in the grazing against 4.3 in the corn division. This difference leads to the inference that moor or waste land is wrongly returned as fallow in some of the grazing counties. The proportion of the acreage under clover and grass under rotation is nearly the same in each division, viz., 9 and 8 per cent. respectively. Permanent pasture occupies 54 per cent. of the acreage in the grazing and 31 per cent. in the corn division.

Of the land under wheat in England, there is but 39 per cent. in the grazing against 61 per cent. in the corn division. The proportion under barley varies a little more, being 38 per cent. in the grazing and 62 per cent. in the corn division. Under oats there is more land in the grazing than in the corn division, the proportions being 52 and 48 per cent. respectively. The proportions of the land under both beans and peas are largely in favour of the corn division, viz., for the two crops 72 and 75 per cent. against 28 and 25 per cent. in the grazing division.

The proportion is reversed in the case of potatoes, of which as much as 61 per cent. of the acreage under that crop is in the grazing against 39 per cent. in the corn division. Of turnips and swedes, 45 per cent. of the acreage is in the grazing and 55 per cent. in the corn division. The proportions of mangold and other green crops are largely in excess in the corn division. In the grazing division there is not very much more land under clover and grass under rotation than there is in the corn division, the percentage proportions being 54 against 46. Under permanent pasture there is nearly twice as much land in the grazing as in the corn division, the former having 66 per cent., and the latter only 34 per cent. of the permanent pasture in England.

With respect to the relative number of live stock in the grazing and corn divisions, there were, when the returns were made, on the 25th of June, about as many horses in the one as in the other division, but of horses under two years of age there was a larger number in the grazing counties. The cattle were nearly twice as numerous in the grazing division, and the sheep were in nearly equal numbers in the two divisions. There were about the same number of pigs in each division. The relative number of cattle and sheep in the two divisions would doubtless be much altered at a later period of the year, owing to additional stock being then kept in the corn counties to consume the root crops.

The counties grouped in each division are the same as were selected last year, and are arranged for the purpose, as far as practicable, in geographical order from north to south.

The grazing division includes the counties of Northumberland, Cumberland, Durham, Westmoreland, York (North and West Ridings), Lancaster, Chester, Derby,

Stafford, Leicester, Salop, Worcester, Hereford, Monmouth, Gloucester, Wilts, Dorset, Somerset, Devon, and Cornwall.

The corn-growing division includes the counties of York (East Riding), Lincoln, Nottingham, Rutland, Huntingdon, Warwick, Northampton, Cambridge, Norfolk, Suffolk, Bedford, Bucks, Oxford, Berks, Hants, Hertford, Essex, Middlesex, Surrey, Kent, and Sussex.

	In Grazing Counties.		In Corn Counties.	
	Acreage.	Percentage of Total Acreage of England.	Acreage.	Percentage of Total Acreage of England.
Total acreage as returned under all kinds of crops, bare fallow, and grass	12,273,000	52.5	11,098,000	47.5
		Percentage of Total Acreage in the Division.		Percentage of Total Acreage in the Division.
Acreage under corn crops	3,042,000	25.0	4,748,000	43.0
" green "	1,182,000	9.0	1,578,000	14.0
" clover and grass } under rotation	1,082,000	9.0	923,000	8.0
" bare fallow	310,000	2.5*	333,000	3.0*
" permanent pasture	6,640,000	54.0	3,457,000	31.0
		Percentage of Acreage under Crop in England.		Percentage of Acreage under Crop in England.
Acreage under wheat	1,308,000	39.0	2,109,000	61.0
" barley	682,000	38.0	1,181,000	62.0
" oats	784,000	52.0	727,000	48.0
" beans	155,000	28.0	393,000	72.0
" peas	96,000	25.0	294,000	75.0
" potatoes	219,000	61.0	137,000	39.0
" turnips and swedes	725,000	45.0	890,000	55.0
" mangold	77,000	27.0	210,000	73.0
" cabbage, kohl- rabi, and rape }	51,000	36.0	89,000	64.0
" vetches, lucerne, &c. }	105,000	30.0	241,000	70.0
" clover, seeds, &c. under rotation }	1,082,000	54.0	923,000	46.0
" permanent pasture	6,640,000	66.0	3,457,000	34.0
		Percentage of Total Number in England.		Percentage of Total Number in England.
Number of horses upon 25th June	575,000	50.4	567,000	49.6
" " under 2 years....	79,945	54.6	66,614	45.4
" cattle "	2,451,000	66.0	1,255,000	34.0
" sheep "	10,095,000	51.0	9,727,000	49.0
" pigs "	811,000	49.8	818,000	50.2

* These percentage proportions are changed to 5.5 and 4.3 when computed upon the arable land in each division.

At the end of the returns for Great Britain will be found tables relating to the agriculture of British possessions and foreign countries, so far as it has been practicable to obtain information of recent date.

Returns for British Possessions.

For the British Possessions there is but little information except for the Australian Colonies and the Cape of Good Hope.

Corn and Wheat in Australia.

In the colonies upon the continent of Australia, according to the latest returns, there were under corn crops 1,310,000 acres, of which 991,000 acres were under wheat. South Australia and Victoria, according to the returns, are the chief wheat growing colonies, the acreage under that crop being 550,000 acres in the former, and 258,000 acres in the latter colony. The yield of wheat is liable to very great variations in Australia. The crop in South Australia in 1868 is reported to have been diminished to the third of the ordinary production by the prevalence of the "red rust" blight. The highest average produce per acre of corn and potatoes is in New Zealand.

Cattle and Sheep in Australia and Cape of Good Hope.

The number of cattle returned in 1868 is 3,515,000 for Australia, and about 400,000 for New Zealand and Tasmania. The number of sheep is returned at 37,441,000 for Australia; 8,418 for New Zealand, and 1,742,000 for Tasmania; making a total of 47,600,000 as the stock of sheep in the Australian colonies. This total, as compared with the number given in the colonial returns for 1867, shows the large increase of 4,000,000 sheep in one year. The latest return for the Cape of Good Hope, in 1865, shows that at that date there were in that colony as many as 692,600 cattle, and 9,836,000 sheep.

Weight of Wool Exported per Head of Sheep.

Comparing the stock of sheep at the dates in these returns, and the quantities of wool exported from the colonies in 1867, there is a very near agreement between Australia and the Cape of Good Hope in the average weight of wool exported per head of the stock of sheep. The average is 3.75 lb. for Australia, and 3.65 lb. for the Cape of Good Hope.

Returns for Foreign Countries.

The returns for foreign countries relate only to those countries for which later information than that published in 1868 could be obtained. The chief officers of the statistical departments in the several countries have obligingly communicated information for publication in these comparative tables.

Distribution of Crops, &c., in Russia. Corn Districts in Russia.

In Russia statistics of the agricultural resources of the country have not been officially collected, but carefully executed maps, illustrative of the agricultural condition of Russia in Europe, have lately been published by the Department of Agriculture attached to the Ministry of State Domains at St. Petersburg. By these maps it appears that arable land, where it amounts to from 50 to 70 per cent. of the total area of districts, occupies about one-tenth of Russia in Europe, lying

south of Moscow as far as Kharkow, and between Tambow on the east and Tchernigow on the west, with a south-west extension from Tchernigow to Podolak and Kichenow near Odessa. The proportion of land under pasture is large in other parts of the country. The best corn districts are: 1. on the Volga, south of Kazan and down below Saratow, extending chiefly on the left bank of the Volga to Oufa and the Oural river; 2. between the Dniester and Dnieper, south of Podolak and Poltova; 3. on the Baltic between Libau and Revel.

*Localities in which Flax, Hemp, Beet-root, and Tobacco are Grown in Russia.
Forests in Russia. Distribution of Live Stock in Russia.*

Flax, for the fibre, is grown in the north-west districts, largely about Pakow, and in the area situated between towns of Pakow, Vitebek, Grodno, and Libau. Hemp is cultivated further to the south, principally in the neighbourhood of the town of Orel or Orlow, and also in the district between the towns of Kalouga, Koursk, Tchernigow, and Vitebek. Flax, for oil seed, is a crop of Southern Russia in the districts between the Dniester and the Don. Beet-root is also a crop of the southern districts situated between the towns of Kalouga and Karkow, but it is more especially cultivated upon the Dnieper near to Kiew. Tobacco is planted in detached districts in the south. Forests are most numerous in the country north of St. Petersburg, but they also occur, in less density, southwards between St. Petersburg and Moscow. As regards the distribution of live stock in European Russia, horses are most numerous in the eastern half of the country, and cattle and sheep are most abundant in the southern and western districts.

Returns for Prussia.

For Prussia, the official returns at present only afford information respecting the percentage variations of the harvest from an average yield, but it is stated that statistics of the agricultural resources of the country will be obtained in 1870.

Returns for Belgium.

In Belgium agricultural returns have been collected for a recent year, but they are not ready for publication.

Returns for France. Change in Bread Corn Grown in France. Excess of Imports of Corn in France. Increase of Sugar Beet-root in France. Fallow Land in France.

In France, information respecting the agricultural condition of the country is obtained with much completeness every ten years, and every year inquiry is made as to the principal crops. The last general returns, relating to the year 1862, were published in 1868. M. Legoyt, Chief of the Department for the General Statistics of France, has attached to the returns an interesting report upon the agriculture of France at different periods, and also an elaborate introduction explanatory of the information collected in 1862. There has been a marked change in the description of bread corn grown in France: in 1862, as compared with 1840, the cultivation of wheat shows an increase of 33 per cent., and that of rye, and mixed rye, and wheat, a decrease of 25 and 45 per cent. respectively. In the same period the average yield of wheat increased from 13·9 to 16·3 bushels per English acre; and potatoes were more largely grown by 34 per cent. It appears that in the 50 years from 1815 to 1865 France imported more corn and flour of all kinds

than she exported. The cultivation of sugar beet-root in France increased from 57,000 hectares in 1840 to 136,000 in 1862, or 137 per cent. The quantity of land annually left fallow has decreased in France, but in 1862 it still amounted to 20 per cent. of the land under tillage.

Variation in Number of Cattle and Sheep in France.

The number of cattle (omitting calves under one year) was larger in 1862 than in 1842 by one million, the increase being almost entirely in cows. The number of sheep in the same period decreased. It is stated by M. Legoyt that in countries in which small holdings prevail, the number of cows generally increases and the number of sheep diminishes.

Number of Proprietors of Land and Number and Average Size of Holdings in France. Number of Leased Farms, and Terms of Leases in France.

There are 3,800,000 proprietors of land in France. The number of agricultural holdings in 1866 was 3,226,000. Of this number, more than one half, or 56 per cent., had less than 12½ English acres of land. The average extent of all the holdings in France (exclusive of forests and woods) was 26¼ acres, which is as nearly as possible the same as the average of all the holdings in Ireland. The number of leased farms in France in 1862 was 568,000, of which 17 per cent. were leased for three years, 25 per cent. for six years, 51 per cent. for nine years, and 7 per cent. for more than nine years; and it is stated that the best cultivation is found in districts in which farms are let upon the longest leases.

Returns for United States. Number of Reaping Machines in United States.

In the United States information respecting the agriculture of the country is obtained by a department of the government, and the interest of the United States in agricultural statistics has been extended to the larger subject of the relative supply of cereals in the American Union and in Europe. A report upon this subject, based upon data for European countries obtained by the American diplomatic agents, was presented to the Statistical Congress at the Hague, by Mr. S. B. Ruggles, of New York, the delegate to the Congress from America. The large product of corn in the United States is stated by Mr. Ruggles to be greatly facilitated by the numerous machines used for sowing, reaping, thrashing, and preparing the grain for market. The number of reaping machines employed in the United States in 1866 was estimated by Mr. Gould, formerly President of the Agricultural Society of the State of New York, at 210,000, and the number now in use is believed to be much larger.

Product of Cereals in United States.

The product of cereals in the United States in 1868 is stated to have been 1,450 millions of bushels (Winchester measure), of which 906 million bushels, or 62 per cent., were maize; 255 millions, or 18 per cent., were oats; 224 millions, or 15 per cent., were wheat; and 65 millions, or 5 per cent., were barley, rye, and buckwheat. The consumption for human food, estimated at 8 bushels per head of the population, is 312 million bushels; and from 500 to 600 million bushels are supposed to be consumed by animals. Large quantities of cereals are distilled into whiskey and other spirituous liquors. Whilst exporting, in ordinary years, large

quantities of maize and wheat, the United States requires an importation of barley for the supply of the breweries. The yearly product of barley, although it is said to have quadrupled between 1850 and 1868, has recently failed to meet the demand of the breweries, and more than 4 millions of bushels of barley were imported in 1868.

Comparison of Produce of Cereals in America and Europe.

Upon the data furnished by official returns for the United States, and from the best information that could be obtained as to the production of cereals in Europe, Mr. Buggles shows that of the corn produce of North America and Europe, nearly one-half is raised in the United States and Russia, and he says that these two great producing countries will be abundantly able, for many years to come, to increase the supply of food in the more densely populated portions of Western Europe.

Too much importance cannot be attached to a knowledge of the relative production and consumption in various countries of the primary articles of food. The more the differences in these respects are ascertained, the better will the principle be recognised that the extent to which countries can be supplied, not only with the necessities but with the common comforts of life, must depend upon the interchange of their surplus productions.

XI.—Textile Manufacture of the United Kingdom.

AN abstract of these valuable tables for 1850, 1856, 1861, and 1868, will be found among the periodical tables at pp. 180—186. The full account from which those figures have been abbreviated will be found in the Miscellaneous Statistics of the Board of Trade for 1869.

REGISTRATION OF THE UNITED KINGDOM.

No. I.—ENGLAND AND WALES.

MARRIAGES—QUARTER ENDED SEPTEMBER, 1869.

BIRTHS AND DEATHS—QUARTER ENDED DECEMBER, 1869.

A.—*Serial Table of MARRIAGES, BIRTHS, and DEATHS, returned in the Years 1869-63, and in the QUARTERS of those Years.*

Calendar YEARS, 1869-63 :—Numbers.

Years.....	'69.	'68.	'67.	'66.	'65.	'64.	'63.
Marriages No.	—	176,729	179,154	187,776	185,474	180,387	173,510
Births..... „	772,857	786,156	768,349	753,870	748,069	740,275	727,417
Deaths „	495,086	480,677	471,073	500,689	490,909	495,531	473,337

QUARTERS of each Calendar Year, 1869-63.

(I.) MARRIAGES :—*Numbers.*

<i>Qrs. ended last day of</i>	'69.	'68.	'67.	'66.	'65.	'64.	'63.
March..... No.	37,713	36,670	36,441	37,579	36,807	37,988	35,528
June „	43,071	45,226	45,589	48,577	45,827	44,599	44,146
September „	43,831	43,480	44,086	46,257	45,852	44,675	41,932
December „	—	51,353	53,038	55,363	56,988	53,125	51,904

(II.) BIRTHS :—*Numbers.*

<i>Qrs. ended last day of</i>	'69.	'68.	'67.	'66.	'65.	'64.	'63.
March..... No.	204,055	198,594	194,763	196,753	194,130	192,947	186,341
June „	188,459	202,892	199,660	192,437	192,988	188,835	189,340
September „	190,132	192,467	190,782	179,086	181,941	181,015	173,439
December „	190,231	192,203	183,144	185,594	179,010	177,478	178,297

(III.) DEATHS :—*Numbers.*

<i>Qrs. ended last day of</i>	'69.	'68.	'67.	'66.	'65.	'64.	'63.
March..... No.	133,437	120,095	134,008	138,136	140,410	142,977	128,096
June „	118,849	109,984	112,355	128,551	115,892	116,880	118,121
September „	114,654	130,502	108,513	116,650	113,362	112,223	112,504
December „	128,146	120,096	116,197	117,352	121,245	123,451	115,116

*Annual Rates of MARRIAGES, BIRTHS, and DEATHS, per 1,000 PERSONS
LIVING in the Years 1869-63, and the QUARTERS of those Years.*

Calendar YEARS, 1869-63:—General Ratios.

YEARS.....	'69.	Mean '59-68.	'68.	'67.	'66.	'65.	'64.	'63.
Estmtd. Popln. of England in thousands in middle of each Year....	21,870	—	21,649	21,430	21,210	20,991	20,772	20,554
Persons Mar- ried	—	16·92	16·34	16·72	17·70	17·68	17·36	16·88
<i>Births</i>	35·34	35·34	36·35	35·85	35·54	35·64	35·64	35·39
<i>Deaths</i>	22·64	22·48	22·20	21·98	23·61	23·39	23·86	23·05

QUARTERS of each Calendar Year, 1869-63.

(I.) PERSONS MARRIED:—Ratio per 1,000.

<i>Qrs. ended last day of</i>	'69.	Mean '59-68.	'68.	'67.	'66.	'65.	'64.	'63.
March	14·04	14·09	13·64	13·84	14·42	14·28	14·72	14·08
June	15·82	17·20	16·84	17·08	18·40	17·54	17·24	17·26
September	15·88	16·37	15·92	16·30	17·28	17·32	17·04	16·16
December	—	19·89	18·76	19·56	20·64	21·46	20·22	19·96

(II.) BIRTHS:—Ratio per 1,000.

<i>Qrs. ended last day of</i>	'69.	Mean '59-68.	'68.	'67.	'66.	'65.	'64.	'63.
March	37·98	36·85	36·93	37·00	37·77	37·65	37·40	36·91
June	34·61	36·65	37·63	37·42	36·44	36·92	36·51	37·00
September	34·45	34·04	35·25	35·28	33·46	34·34	34·53	33·43
December	34·38	33·79	35·21	33·78	34·58	33·70	33·76	34·28

(III.) DEATHS:—Ratio per 1,000.

<i>Qrs. ended last day of</i>	'69.	Mean '59-68.	'68.	'67.	'66.	'65.	'64.	'63.
March	24·84	25·36	22·26	25·46	26·52	27·23	27·72	25·38
June	21·83	22·03	20·41	21·06	24·34	22·17	22·60	23·06
September	20·77	20·63	23·88	20·06	21·79	21·40	21·41	21·69
December	23·16	21·90	21·99	21·43	21·87	22·83	23·49	22·18

B.—Comparative Table of CONSOLS, PROVISIONS, PAUPERISM, and TEMPERATURE in each of the Nine QUARTERS ended December, 1869.

1	2	3	4	5		6	7	8		9	10
Quarters ending	Average Price of Consols (for Money).	Average Rate of Bank of England Dis- count.	Average Price of Wheat per Quarter in England and Wales.	Average Prices of Meat per lb. at Leadenhall and Newgate Markets (by the Carcase), with the <i>Mean</i> Prices.		Average Prices of Potatoes (York Regents) per Ton at Waterside Market, Southwark.	Pauperism.		Mean Tem- pera- ture.		
				Beef.	Mutton.		Quarterly Average of the Number of Paupers relieved on the <i>last day</i> of each week.*				
							In-door.	Out-door.			
Dec. 31	£ 94½	2'0	s. d. 67 11	d. d. d. 4½—6½ 5½	d. d. d. 4½—6½ 5½	s. s. s. 110—155 132	145,886	771,754	42'5		
1868											
Mar. 31	98	2'0	72 2	4½—6½ 5½	4½—6½ 5½	125—170 147	159,716	860,165	41'4		
June 30	94½	2'0	71 10	4½—6½ 5½	4½—7 5½	130—170 150	142,588	800,944	55'8		
Sept. 30	94½	2'0	59 1	4½—6½ 5½	4½—6½ 5½	120—175 147	138,284	778,804	63'9		
Dec. 31	94½	2'4	51 11	4½—7 5½	4½—6½ 5½	70—140 105	152,733	797,546	45'1		
1869											
Mar. 31	92½	3'0	50 2	4½—7½ 6	4½—7½ 6½	70—140 105	162,308	850,888	41'3		
June 30	93½	4'2	45 7	4½—7½ 6½	5—7½ 6½	60—130 95	145,094	816,260	52'0		
Sept. 30	93	2'9	50 11	4½—7½ 6½	5½—7½ 6½	95—125 110	137,406	781,382	61'4		
Dec. 31	93½	2'8	46 0	4½—7½ 6½	5—7½ 6½	75—100 87	151,996†	813,315†	43'3		

* Exclusive of vagrants and pauper lunatics in asylums.

† These figures include an estimate for December, the returns not being complete for that month.

C.—General Average Death-Rate Table:—Annual Rate of Mortality to 1,000 of the Population in the Eleven Divisions of England.

Divisions.	Average Annual Rate of Mortality to 1,000 Living in						
	Ten Years. 1851-60.	1868.		1869.			
		Year.	Autumn Quarter.	Winter Quarter.	Spring Quarter.	Summer Quarter.	Autumn Quarter.
I. London	23·63	23·57	24·52	25·43	22·25	24·31	26·66
II. South-Eastern counties	19·55	18·91	18·31	21·39	18·71	18·45	20·16
III. South Midland „	20·44	19·81	19·00	21·92	19·01	18·94	20·84
IV. Eastern counties	20·58	19·57	19·31	22·42	20·96	18·41	19·79
V. South-Western counties	20·01	18·12	18·29	21·77	20·62	17·05	20·16
VI. West Midland „	22·35	21·05	20·39	23·58	20·06	18·75	22·08
VII. North Midland „	21·10	21·26	20·48	24·35	21·74	20·02	22·05
VIII. North-Western „	25·51	26·14	25·54	28·13	23·63	23·23	25·65
IX. Yorkshire	23·09	24·66	25·60	28·08	24·79	23·87	26·45
X. Northern counties	21·99	24·12	24·39	26·06	22·63	21·34	22·83
XI. Monmouthshire and Wales	21·28	19·70	18·35	23·12	22·07	16·92	19·60

Note.—The mortality for the year 1868 is the mean of the quarterly rates.

D.—Special Average Death-Rate Table:—ANNUAL RATE of MORTALITY per 1,000 in TOWN and COUNTRY DISTRICTS of ENGLAND in each Quarter of the Years 1869-67.

	Area in Statute Aerea.	Population Enumerated. 1861.	Quarters ending	Annual Rate of Mortality per 1,000 in each Quarter of the Years			
				1869.	Mean '69-68.	1868.	1867.
In 142 Districts, and 56 Sub-districts, comprising the Chief Towns.....	3,287,151	10,930,841	March ..	26·55	27·24	24·03	27·23
			June	22·78	23·39	22·20	21·99
			Sept.	23·32	22·90	26·49	22·47
			Dec.	25·75	24·31	24·15	23·92
			Year	24·60	24·46	24·22	23·90
In the remaining Districts and Sub-districts of England and Wales, comprising chiefly Small Towns and Country Parishes	34,027,732	9,135,383	Year	20·04	20·00	19·40	19·54
			March ..	22·56	23·02	20·12	23·16
			June	20·56	20·32	18·04	19·84
			Sept.	17·36	17·79	20·44	16·93
			Dec.	19·67	18·88	18·98	18·21

Note.—The three months, January, February, March, contain 90, in leap year 91 days; the three months, April, May, June, 91 days; each of the last two quarters of the year 92 days. For this inequality a correction has been made in the calculations, also for the difference between 365 and 365·25 days, and 366 and 365·25 days in leap year.

E.—Special Town Table:—POPULATION; BIRTHS, DEATHS; MEAN TEMPERATURE and RAINFALL in last Autumn Quarter, in Fourteen Large Towns.

Cities, &c.	Estimated Population in the Middle of the Year 1869.	Births in 13 Weeks ending 1st Jan., 1870.	Deaths in 13 Weeks ending 1st Jan., 1870.	Annual Rate to 1,000 Living during the 13 Weeks ending Dec., 1869.		Mean Temperature in 13 Weeks ending 1st Jan., 1870.	Rainfall in Inches in 13 Weeks ending 1st Jan., 1870.
				Births.	Deaths.		
Total of 14 large towns...	6,546,587	58,263	44,950	35·72	27·56	42·7	8·36
London	3,170,754	28,293	21,063	35·81	26·66	43·0	6·62
Bristol	169,423	1,482	1,138	35·11	26·96	43·6	8·90
Birmingham	360,846	3,063	2,313	34·07	25·73	—	—
Liverpool	509,052	4,680	3,663	36·90	28·88	44·3	8·79
Manchester	370,892	3,326	2,827	35·99	30·59	42·1	11·13
Salford	119,350	1,104	866	37·13	29·12	42·4	10·83
Sheffield	239,752	2,350	1,839	39·34	30·79	42·6	8·06
Bradford	138,522	1,276	898	36·97	26·02	43·4	6·19
Leeds	253,110	2,512	1,757	39·83	27·86	43·4	7·42
Hull	126,682	1,030	819	32·63	25·95	40·1	8·29
Newcastle-on-Tyne	130,503	1,124	857	34·57	26·36	—	—
Edinburgh	178,002	1,651	1,255	37·23	28·30	42·4	4·50
Glasgow	458,937	4,437	3,792	38·80	33·16	41·1	12·75
Dublin	320,762	1,935	1,863	24·21	23·31	44·5	6·83
Paris	1,889,842 (1867.)	—	11,419	—	24·25	—	—
Berlin	702,437 (1869.)	7,300	4,578	41·71	26·16	39·3	—
Vienna	605,200	—	3,844	—	25·49	39·9	—

F.—Divisional Table:—MARRIAGES Registered in Quarters ended 30th September, 1869-67; and BIRTHS and DEATHS in Quarters ended 31st December, 1869-67.

1 DIVISIONS. (England and Wales.)	2 AREA in Statute Acres.	3 POPULATION, 1861. (Persons.)	4 5 6 MARRIAGES in Quarters ended 30th September.		
			1869.	1868.	1867.
ENGLD. & WALES....Totals	37,324,883	No. 20,066,224	No. 43,831	No. 43,480	No. 44,086
I. London	77,997	2,803,989	8,102	8,213	8,537
II. South-Eastern	4,065,935	1,847,661	3,714	3,723	3,865
III. South Midland	3,201,290	1,295,515	2,192	2,301	2,118
IV. Eastern	3,214,099	1,142,562	1,686	1,807	1,722
V. South-Western	4,993,660	1,835,714	3,263	3,051	3,158
VI. West Midland	3,862,732	2,436,116	5,115	4,859	4,948
VII. North Midland	3,543,397	1,289,380	2,376	2,449	2,365
VIII. North-Western	2,000,227	2,935,540	7,632	7,579	7,715
IX. Yorkshire	3,654,636	2,015,541	4,827	4,668	4,792
X. Northern	3,492,322	1,151,372	2,538	2,428	2,437
XI. Monmthsh. & Wales	5,218,588	1,312,834	2,386	2,402	2,429

7 DIVISIONS. (England and Wales.)	8 9 10 BIRTHS in Quarters ended 31st December.			11 12 13 DEATHS in Quarters ended 31st December.		
	1869.	1868.	1867.	1869.	1868.	1867.
ENGLD. & WALES....Totals	No. 190,231	No. 192,203	No. 183,144	No. 128,146	No. 120,096	No. 116,197
I. London	28,293	27,740	27,652	21,063	18,943	18,526
II. South-Eastern	17,108	17,739	15,912	10,467	9,388	9,117
III. South Midland	11,749	11,844	11,074	7,094	6,439	6,421
IV. Eastern	9,601	9,580	8,932	5,824	5,667	5,389
V. South-Western	14,134	14,389	13,569	9,470	8,579	8,268
VI. West Midland	23,214	23,217	22,303	15,181	13,834	13,627
VII. North Midland	11,422	11,623	11,166	7,532	6,958	6,503
VIII. North-Western	29,935	30,340	28,681	21,871	21,427	21,686
IX. Yorkshire	20,883	21,093	20,319	14,888	14,239	11,992
X. Northern	12,283	12,986	12,068	7,683	8,067	8,019
XI. Monmthsh. & Wales	11,609	11,702	11,468	7,073	6,555	6,649

G.—General Meteorological Table, Quarter ended December, 1869.

[Abstracted from the particulars supplied to the Registrar-General by JAMES GLAISHER, Esq., F.R.S., &c.]

		Temperature of										Elastic Force of Vapour.		Weight of Vapour in a Cubic Foot of Air.		
		Air.			Evaporation.		Dew Point.		Air— Daily Range.							Water of the Thames
		Mean.	Diff. from Average of 98 Years.	Diff. from Average of 28 Years.	Mean.	Diff. from Average of 28 Years.	Mean.	Diff. from Average of 28 Years.	Mean.	Diff. from Average of 28 Years.						
1869.	Months.	Mean.	Diff. from Average of 98 Years.	Diff. from Average of 28 Years.	Mean.	Diff. from Average of 28 Years.	Mean.	Diff. from Average of 28 Years.	Mean.	Diff. from Average of 28 Years.	Mean.	Diff. from Average of 28 Years.	Mean.	Diff. from Average of 28 Years.		
		°	°	°	°	°	°	°	°	°	°	In.	Gr.	Gr.		
	Oct.	48·9	−0·8	−1·5	46·6	−1·9	44·2	−2·1	15·5	+0·8	53·0	290	−026	3·2		
	Nov. ...	43·0	+0·6	−0·9	40·8	−0·8	38·2	−1·6	11·7	0·0	43·9	231	−019	2·7		
	Dec.	37·9	−1·3	−2·7	36·2	−2·9	33·9	−3·4	8·6	−1·0	38·2	195	−030	2·3		
	Mean ...	43·3	−0·5	−1·7	41·2	−1·9	38·8	−2·4	11·9	−0·1	45·0	239	−025	2·7		

		Degree of Humidity.		Reading of Barometer.		Weight of a Cubic Foot of Air.		Rain.		Daily Horizontal Move- ment of the Air.	Reading of Thermometer on Grass.				
											Number of Nights it was			Low- est Read- ing at Night.	High- est Read- ing at Night.
		Mean.	Diff. from Average of 28 Years.	Mean.	Diff. from Average of 28 Years.	Mean.	Diff. from Average of 28 Years.	Amnt.	Diff. from Average of 54 Years.		At or below 30°.	Be- tween 30° and 40°.	Above 40°.		
1869.	Months.	Mean.	Diff. from Average of 28 Years.	Mean.	Diff. from Average of 28 Years.	Mean.	Diff. from Average of 28 Years.	Amnt.	Diff. from Average of 54 Years.	Miles.					
	Oct.	84	−3	29·867	+166	514	+5	1·8	−1·0	255	11	10	10	18·8	
	Nov. ...	83	−5	29·766	−000	549	+1	2·4	0·0	336	17	10	3	19·3	
	Dec.	86	−2	29·619	−196	552	0	2·8	+0·9	361	12	18	1	14·3	
	Mean ...	84	−3	29·751	−010	548	+2	Sum 7·0	Sum −0·1	Mean 317	Sum 40	Sum 38	Sum 14	Lowest 14·3	

Note.—In reading this table it will be borne in mind that the sign (−) minus signifies below the average, and that the sign (+) plus signifies above the average.

The mean temperature of October was 48°·9, being 0°·8 lower than the average of ninety-eight years, higher than the corresponding values in 1868 and 1867 by 1°·0 and 0°·2 respectively, but lower than in any year in the period 1853-66.

The mean temperature of November was 43°·0, being 0°·6 higher than the average of ninety-eight years, higher than in 1868 and 1867 when 41°·5 and 41°·4 respectively were recorded, but lower than in the preceding four years, viz., 1863 to 1866.

The mean temperature of December was 37°·9, being 1°·3 lower than the average of ninety-eight years, lower than in 1868 by 8°·1, higher than in 1867 by 0°·4, but lower than in any previous year as far back as 1860.

The mean high day temperature was the same as the average in November, but lower by 1°·1 and 3°·4 respectively in October and December.

H.—Special Meteorological Table, Quarter ended 31st December, 1869.

1	2	3	4	5	6	7	8	9
NAMES OF STATIONS.	Mean Pressure of Dry Air reduced to the Level of the Sea.	Highest Reading of the Thermo- meter.	Lowest Reading of the Thermo- meter.	Range of Tem- perature in the Quarter.	Mean Monthly Range of Tem- perature.	Mean Daily Range of Tem- perature.	Mean Tem- perature of the Air.	Mean Degree of Hu- midity.
	in.	°	°	°	°	°	°	
Guernsey	29·778	73·0	27·0	46·0	30·3	7·7	48·0	83
Osborne	29·701	77·7	21·0	56·7	37·1	12·3	44·7	88
Barnstaple	29·683	77·5	14·5	63·0	40·8	10·6	46·9	84
Royal Observatory	29·686	73·9	21·3	52·6	37·5	11·9	43·3	84
Royston	29·700	75·8	16·8	59·0	40·0	12·7	43·1	85
Lampeter'	29·713	81·8	0·0	81·8	48·1	14·2	43·8	84
Norwich	29·648	72·0	17·5	54·5	36·0	10·8	43·1	89
Derby	29·620	71·0	15·0	56·0	38·0	12·2	42·7	90
Manchester	29·646	75·0	13·5	61·5	41·1	13·1	42·5	85
Stonyhurst	29·627	72·8	13·4	59·4	37·9	10·7	42·4	86
York	29·590	70·0	15·0	55·0	39·0	14·2	42·4	87
North Shields	29·658	69·0	18·7	50·3	35·4	11·4	42·2	87

10	11	12	13	14	15	16	17	18
NAMES OF STATIONS.	WIND.					Mean Amount of Cloud.	RAIN.	
	Mean estimated Strength.	Relative Proportion of					Number of Days on which it fell.	Amount collected.
		N.	E.	S.	W.			
								in.
Guernsey	1·6	8	5	7	11	5·7	53	11·2
Osborne	1·7	9	4	7	11	6·2	31	7·0
Barnstaple	1·5	9	4	6	12	4·2	60	14·1
Royal Observatory	0·7	7	4	8	12	6·1	37	7·0
Royston	—	7	4	7	13	6·3	57	6·8
Lampeter	0·6	10	4	7	10	7·4	59	14·9
Norwich	—	6	5	7	13	—	41	10·4
Derby	—	8	3	6	14	—	50	7·0
Manchester	—	7	5	11	8	7·6	61	11·0
Stonyhurst	—	6	4	5	16	6·6	76	17·8
York	—	—	—	—	—	—	61	7·0
North Shields	2·0	9	4	6	12	6·3	60	8·5

No. II.—SCOTLAND.

MARRIAGES, BIRTHS, AND DEATHS IN THE QUARTER

ENDED 30TH SEPTEMBER, 1869.

I.—Serial Table:—Number of Births, Deaths, and Marriages in Scotland, and their Proportion to the Population, Estimated to the Middle of each Year, during each Quarter of the Years 1869-85 inclusive.

	1869.		1868.		1867.		1866.		1865.	
	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.
1st Quarter—										
Births	28,429	3'54	28,736	3'60	27,952	3'52	28,883	3'66	28,594	3'65
Deaths	20,431	2'54	18,036	2'26	19,977	2'51	19,095	2'42	20,804	2'65
Marriages ..	5,291	0'66	5,287	0'66	5,356	0'66	5,642	0'71	5,416	0'69
Mean Temperature }	40°·0		40°·6		56°·5		38°·0		35°·8	
2nd Quarter—										
Births	29,472	3'67	31,025	3'89	30,375	3'83	29,808	3'78	30,318	3'86
Deaths	19,449	2'42	16,928	2'12	17,475	2'20	18,575	2'35	17,074	2'17
Marriages ..	5,596	0'69	5,660	0'71	5,627	0'70	6,034	0'76	5,707	0'72
Mean Temperature }	48°·4		51°·0		49°·0		49°·8		51°·5	
3rd Quarter—										
Births	27,646	3'44	28,393	3'56	27,870	3'51	27,204	3'45	27,306	3'48
Deaths	16,532	2'06	16,662	2'09	15,125	1'90	15,470	1'95	15,924	2'02
Marriages ..	4,870	0'60	4,804	0'59	5,071	0'63	5,104	0'64	5,348	0'68
Mean Temperature }	56°·4		57°·4		55°·2		54°·4		57°·5	
4th Quarter—										
Births	27,848	3'47	27,519	3'45	27,847	3'51	27,772	3'52	26,852	3'42
Deaths	19,377	2'42	17,760	2'22	16,491	2'07	18,210	2'30	17,089	2'17
Marriages ..	6,326	0'78	6,202	0'77	6,564	0'82	6,908	0'87	7,145	0'91
Mean Temperature }	40°·9		41°·5		42°·3		43°·5		43°·4	
Year—										
Population.	3,205,481		3,188,125		3,170,769		3,153,413		3,136,057	
Births	113,395	3'54	115,673	3'63	114,044	3'59	113,667	3'60	113,070	3'60
Deaths	75,789	2'36	69,386	2'17	69,068	2'17	71,350	2'26	70,891	2'26
Marriages ..	22,083	0'68	21,853	0'68	22,618	0'71	23,688	0'75	23,611	0'75

II.—*Special Average Table:—Number of Births, Deaths, and Marriages in Scotland and in the Town and Country Districts during the Quarter ending 31st December, 1869, and their Proportion to the Population; also the Number of Illegitimate Births, and their Proportion to the Total Births.*

	Population.		Total Births.			Illegitimate Births.		
	Census, 1861.	Estimated to Middle of 1869.	Number.	Per Cent.	Ratio. One in every	Number.	Per Cent.	Ratio. One in every
SCOTLAND	3,062,294	3,205,481	27,848	3·47	28	2,677	9·6	10·4
131 town districts	1,615,475	1,780,372	16,878	3·79	26	1,558	9·2	10·8
885 rural „	1,446,819	1,425,109	10,970	3·07	31	1,119	10·2	9·8

	Population.		Deaths.			Marriages.		
	Census, 1861.	Estimated to Middle of 1869.	Number.	Per Cent.	Ratio. One in every	Number.	Per Cent.	Ratio. One in every
SCOTLAND	3,062,294	3,205,481	19,377	2·42	41	6,326	0·78	126
131 town districts	1,615,475	1,780,372	13,222	2·96	33	3,939	0·88	112
885 rural „	1,446,819	1,425,109	6,155	1·72	53	2,387	0·67	149

Note.—The constitution of several of the districts was altered on January 1, 1868; consequently the numbers of the population in the town and rural districts differ somewhat from those of previous years.

III.—*Bastardy Table:—Proportion of Illegitimate in every Hundred Births in the Divisions and Counties of Scotland, during the Quarter ending 31st December, 1869.*

Divisions.	Per Cent. of Illegitimate.	Counties.	Per Cent. of Illegitimate.	Counties.	Per Cent. of Illegitimate.	Counties.	Per Cent. of Illegitimate.
SCOTLAND	9·6						
Northern	7·2	Shetland	4·4	Forfar	11·2	Lanark	7·8
North-Western	5·6	Orkney	7·1	Perth	8·3	Linlithgow ..	8·7
North-Eastern	14·6	Caithness	8·5	Fife	7·4	Edinburgh ..	9·3
East Midland ..	9·5	Sutherland	9·8	Kinross	8·0	Haddington ..	11·9
West Midland ..	8·2	Ross and Cromarty }	3·8	Clackmannan	11·7	Berwick	9·9
South-Western	8·1	Inverness	7·4	Stirling	9·4	Peebles	11·1
South-Eastern ..	9·5	Nairn	11·1	Dumbarton ..	8·0	Selkirk	8·0
Southern	16·5	Elgin	17·9	Argyll	6·7	Roxburgh ..	12·7
		Banff	11·7	Bute	6·7	Dumfries	19·3
		Aberdeen	14·8	Renfrew	7·9	Kirkcudbright ..	17·5
		Kincardine	11·0	Ayr	9·8	Wigtown	15·4

IV.—*Divisional Table:—MARRIAGES, BIRTHS, and DEATHS Registered in the Quarter ended 31st December, 1869.*

1	2	3	4	5	6
DIVISIONS. (Scotland)	AREA in Statute Acres.	POPULATION, 1861. (Persons.)	Marriages.	Births.	Deaths.
		No.	No.	No.	No.
SCOTLAND <i>Totals</i>	19,639,377	3,062,294	6,326	27,848	19,377
I. Northern	2,261,622	130,423	221	889	500
II. North-Western	4,739,876	167,329	213	1,098	659
III. North-Eastern	2,429,594	366,783	759	3,118	1,505
IV. East Midland	2,790,492	523,822	1,091	4,511	3,450
V. West Midland	2,693,176	242,507	433	2,003	1,474
VI. South-Western	1,462,397	1,008,253	2,362	10,718	8,292
VII. South-Eastern	1,192,524	408,962	909	3,993	2,604
VIII. Southern	2,069,696	214,216	338	1,518	893

No. III.—GREAT BRITAIN AND IRELAND.

SUMMARY of MARRIAGES, in the Quarter ended 30th September, 1869;
and BIRTHS and DEATHS, in the Quarter ended 31st December, 1869.

COUNTRIES.	[000's omitted].		Marriages.	Per 1,000 of Popu- lation.	Births.	Per 1,000 of Popu- lation.	Deaths.	Per 1,000 of Popu- lation.
	Area in Statute Acres.	Popu- lation, 1861. (Persons.)						
		No.	No.	Ratio.	No.	Ratio.	No.	Ratio.
England and Wales	37,325,	20,066,	48,831	2·2	190,231	9·5	128,146	6·4
Scotland	19,639,	3,062,	4,870	1·6	27,848	9·1	19,377	6·3
Ireland	20,322,	5,799,	5,360	·9	33,737	5·8	20,722	3·6
GREAT BRITAIN AND IRELAND }	77,287,	28,927,	54,061	1·9	251,816	8·7	168,245	5·8

Note.—The numbers against Ireland represent the marriages, births, and deaths that the local registrars have succeeded in recording; but how far the registration approximates to absolute completeness, does not at present appear to be known. It will be seen that the Irish ratios are much under those of England and Scotland.—*Ed. S. J.*

TEXTILE MANUFACTURE OF THE UNITED KINGDOM.

I.—*Number of Factories of each kind subject to the Factories Acts, with the Number of Spindles and Power Looms, and Amount of Steam and Water Power, and Number of Persons Employed in the United Kingdom, in each of the Years 1850, 1856, 1861, and 1868.*

Description of Factories.	Years.	In the United Kingdom.					Total Number of Persons Employed.
		Number of Factories.	Number of Spinning Spindles. [000's omitted.]	Number of Power Looms.	Motive Horse-Power.		
					Steam.	Water.	
Cotton	1850	1,932	20,977,	249,627	71,005	11,550	330,924
	'56	2,210	28,010,	298,847	88,001	9,131	379,213
	'61	2,887	30,387,	399,992	281,663	12,467	451,569
	'68	2,549	32,000,	379,329	191,033	10,029	401,064
Woollen	1850	1,497	1,595,	9,439	13,455	8,689	74,443
	'56	1,505	1,787,	14,453	17,490	8,411	79,091
	'61	1,679	2,183,	21,770	26,879	9,598	86,983
	'68	1,652	4,590,	46,204	42,633	11,344	127,181
Worsted	1850	501	876,	32,617	9,890	1,625	79,737
	'56	525	1,325,	38,946	13,475	1,431	87,794
	'61	532	1,289,	43,048	26,234	1,970	86,063
	'68	703	2,193,	71,666	44,571	2,006	131,896
Silk	1850	277	1,226,	6,092	2,858	853	42,544
	'56	460	1,094,	9,260	4,360	816	56,137
	'61	771	1,339,	10,709	6,186	864	52,429
	'68	591	978,	14,825	5,897	649	41,017
Flax	1850	393	965,	3,670	10,905	3,387	68,434
	'56	417	1,288,	8,689	14,387	3,935	80,262
	'61	399	1,217,	14,792	31,727	4,354	87,429
	'68	405	1,588,	31,040	41,548	5,318	118,929
Hemp	1861	5	3,	1	127	—	607
	'68	26	10,	88	950	15	2,234
Jute	1861	36	33,	554	2,048	60	5,967
	'68	41	81,	3,919	6,891	255	14,170
Total for United Kingdom	1850	4,600	25,639,	301,445	108,113	26,104	596,082
	'56	5,117	33,504,	370,195	137,713	23,724	682,497
	'61	6,378	36,450,	490,866	375,311	29,859	775,534
	'68	6,417	41,516,	549,365	337,851	29,830	857,964

Note.—Some small manufactures have, in consequence of their comparative insignificance, been excluded from the details, though they enter into the "Total for the United Kingdom." The number of persons employed in them, however, is stated in Tables V, VI, and VII.

II.—*Number of Factories in England and Wales, distinguishing the Spinning from the Spinning and Weaving, and other Establishments, 1850, 1856, 1861, and 1868.*

	Year.	Spinning.		Spinning and Weaving.		Total Factories.*	Total of Spindles.* [000's omitted.]
		Factories.	Spindles. [000's omitted.]	Factories.	Spindles. [000's omitted.]		
Cotton	1850	762	8,685,	769	10,055,	1,753	19,174,
	'56	910	15,261,	1,042	10,558,	2,046	25,818,
	'61	1,079	15,077,	1,393	13,274,	2,715	28,352,
	'68	1,041	14,827,	1,262	15,651,	2,406	30,478,
Woollen	1850	875	784,	216	571,	1,306	1,357,
	'56	762	726,	331	773,	1,282	1,500,
	'61	729	761,	474	1,086,	1,456	1,847,
	'68	549	715,	677	3,508,	1,420	4,223,
Worsted ...	1850	222	418,	252	447,	493	865,
	'56	220	629,	271	669,	511	1,298,
	'61	206	612,	282	633,	512	1,246,
	'68	293	1,163,	378	925,	687	2,147,
Silk	1850	192	886,	70	303,	272	1,189,
	'56	249	810,	165	254,	454	1,064,
	'61	244	1,051,	471	255,	761	1,306,
	'68	196	637,	368	331,	587	968,
Flax.....	1850	—	198,	22	66,	185	265,
	'56	96	366,	36	76,	189	442,
	'61	89	302,	41	42,	186	345,
	'68	49	313,	66	124,	128	438,
Hemp	1861	2	—	1	—	3	—
	'68	17	3,	2	—	19	3,
Jute.....	1861	3	1,	—	—	4	—
	'68	2	—	6	8,	8	8,
Total	1850	2,051	10,971,	1,329	11,442,	3,959	22,850,
	'56	2,237	17,792,	1,845	12,330,	4,482	30,122,
	'61	2,352	17,804,	2,662	15,290,	5,652	33,096,
	'68	2,147	17,658,	2,759	20,547,	5,699	38,343,

* The total of factories and of spindles in this and the two subsequent tables, includes those employed in "other" processes.

III.—*Number of Factories in Scotland, distinguishing the Spinning from the Spinning and Weaving, and other Establishments, 1850, 1856, 1861, and 1868.*

	Year.	Spinning.		Spinning and Weaving.		Total Factories.*	Total of Spindles.* [000's omitted.]
		Factories.	Spindles. [000's omitted.]	Factories.	Spindles. [000's omitted.]		
Cotton.....	1850	68	1,163,	75	442,	168	1,683,
	'56	70	1,453,	64	589,	152	2,041,
	'61	60	1,154,	78	692,	163	1,915,
	'68	47	819,	78	579,	131	1,398,
Woollen	1850	165	176,	17	48,	182	224,
	'56	157	160,	36	112,	196	272,
	'61	124	131,	60	186,	184	317,
	'68	52	124,	132	219,	187	343,
Worsted	1850	6	9,	—	—	6	9,
	'56	6	21,	2	—	8	21,
	'61	10	32,	7	7,	17	39,
	'68	9	42,	5	—	14	42,
Silk	1850	5	37,	—	—	5	37,
	'56	6	30,	—	—	6	30,
	'61	4	23,	2	9,	8	32,
	'68	—	—	2	10,	2	10,
Flax.....	1850	161	263,	27	41,	189	303,
	'56	119	222,	42	56,	168	278,
	'61	84	197,	65	82,	163	279,
	'68	52	125,	80	131,	184	256,
Hemp	1861	2	2,	—	—	2	2,
	'68	2	—	2	2,	4	2,
Jute.....	1861	18	14,	14	17,	27	31,
	'68	5	9,	25	63,	31	73,
Total	1850	405	1,648,	119	531,	550	2,256,
	'56	358	1,886,	144	757,	532	2,643,
	'61	297	1,553,	226	993,	568	2,615,
	'68	167	1,119,	324	1,004,	507	2,124,

* See note, Table II.

IV.—*Number of Factories in Ireland, distinguishing the Spinning from the Spinning and Weaving, and other Establishments, 1850, 1856, 1861, and 1868.*

	Year.	Spinning.		Spinning and Weaving.		Total Factories.*	Total of Spindles.* [000's omitted.]
		Factories.	Spindles. [000's omitted.]	Factories.	Spindles. [000's omitted.]		
Cotton	1850	4	64,	7	56,	11	120,
	'56	6	107,	6	43,	12	150,
	'61	3	78,	6	42,	9	120,
	'68	3	80,	8	44,	13	124,
Woollen	1850	7	12,	2	2,	9	15,
	'56	23	9,	4	6,	27	15,
	'61	26	8,	13	11,	39	19,
	'68	7	2,	37	22,	45	24,
Worsted	1850	2	1,	—	—	2	1,
	'56	5	5,	1	1,	6	5,
	'61	3	5,	—	—	3	5,
	'68	2	2,	—	—	2	2,
Silk	1850	—	—	—	—	—	—
	'56	—	—	—	—	—	—
	'61	1	1,	1	—	2	1,
	'68	—	—	2	—	2	—
Flax	1850	67	385,	2	12,	69	396,
	'56	85	455,	22	113,	110	568,
	'61	60	375,	34	217,	100	593,
	'68	68	573,	67	321,	143	894,
Hemp	1861	—	—	—	—	—	—
	'68	3	5,	—	—	3	5,
Jute	1861	2	2,	—	—	5	2,
	'68	—	—	2	—	2	—
Total	1850	80	462,	11	70,	91	532,
	'56	119	576,	38	163,	155	738,
	'61	96	469,	54	270,	158	739,
	'68	83	662,	116	387,	211	1,049,

* See note to Table II.

V.—Total Number of Males and Females Employed in the several kinds of Factories in England and Wales in 1850, 1856, 1861, and 1868.

	Year.	Persons Employed in				Total of Persons.
		Spinning.	Weaving.	Spinning and Weaving.	Other Processes.	
Cotton	1850	80,544	22,389	176,776	11,953	291,662
	'56	99,630	42,057	195,893	3,590	341,170
	'61	115,192	63,160	215,577	13,669	407,598
	'68	92,050	72,889	188,126	3,987	357,052
Woollen	1850	30,552	333	26,556	6,985	64,426
	'56	24,393	390	36,316	8,031	69,130
	'61	18,899	1,409	46,850	9,151	76,309
	'68	16,510	2,284	75,659	7,485	101,938
Worsted	1850	22,656	15,716	39,364	1,179	78,915
	'56	21,480	13,837	50,118	1,255	86,690
	'61	21,860	13,082	47,054	976	82,972
	'68	42,983	17,601	66,689	1,137	128,410
Silk	1850	25,169	4,608	11,236	690	41,703
	'56	30,076	11,276	12,478	1,470	55,300
	'61	27,500	11,757	9,556	2,378	51,191
	'68	21,004	4,977	13,039	936	39,956
Flax	1850	14,139	996	3,504	362	19,001
	'56	13,127	1,814	4,654	192	19,787
	'61	14,205	1,754	4,191	155	20,305
	'68	11,028	3,274	7,065	492	21,859
Hemp	1861	56	—	8	—	62
	'68	1,278	52	—	—	1,330
Jute	1861	91	—	—	16	107
	'68	51	—	1,709	—	1,760
Hosiery	1861	—	—	—	4,063	4,063
	'68	—	—	—	6,419	6,419
Shoddy	1868	—	—	—	3,187	3,187
Horsehair	'68	—	—	—	828	828
Felt	'68	—	—	—	19	19
Elastic	'68	—	—	—	3,821	3,821
Lace	'68	—	—	—	6,755	6,755
Total	1850	173,060	44,942	257,436	21,169	495,707
	'56	188,706	69,374	299,459	14,538	572,077
	'61	197,803	91,162	323,234	30,408	642,607
	'68	184,904	101,077	352,287	35,066	673,334

VI.—*Total Number of Males and Females Employed in the several kinds of Factories in Scotland, in each of the Years 1850, 1856, 1861, and 1868.*

	Year.	Persons Employed in				Total of Persons.
		Spinning.	Weaving.	Spinning and Weaving.	Other Processes.	
Cotton	1850	14,057	9,176	11,212	1,880	36,325
	'56	13,730	8,013	11,731	1,224	34,698
	'61	10,175	11,737	14,155	5,170	41,237
	'68	10,961	16,971	11,617	260	39,809
Woollen	1850	6,954	126	2,384	—	9,464
	'56	4,828	37	4,097	318	9,280
	'61	2,979	570	6,263	—	9,812
	'68	1,733	1,345	11,225	457	14,760
Worsted	1850	746	—	—	—	746
	'56	729	166	—	—	895
	'61	1,725	681	510	—	2,916
	'68	2,398	1,002	14	—	3,414
Silk	1850	841	—	—	—	841
	'56	837	—	—	—	837
	'61	697	—	316	91	1,104
	'68	—	—	621	—	621
Flax	1850	21,050	2,404	4,741	117	28,312
	'56	18,509	5,716	7,233	264	31,722
	'61	14,969	7,490	10,895	245	33,599
	'68	8,724	10,832	20,381	88	40,020
Hemp	1861	545	—	—	—	545
	'68	30	—	462	—	492
Jute	1861	1,730	60	3,628	—	5,418
	'68	976	278	10,868	5	12,127
Hosiery	1861	—	—	—	424	424
	'68	—	—	—	141	141
Horsehair	1868	—	—	—	283	283
Total	1850	43,648	11,706	18,337	1,997	75,688
	'56	38,633	13,932	23,061	1,806	77,432
	'61	32,820	20,538	35,767	5,930	95,055
	'68	24,822	30,428	55,188	1,229	111,667

VII.—Total Number of Males and Females Employed in the several kinds of Factories in Ireland, in each of the Years 1850, 1856, 1861, and 1868.

	Year.	Persons Employed in				Total of Persons.
		Spinning.	Weaving.	Spinning and Weaving.	Other Processes.	
Cotton	1850	638	—	2,299	—	2,937
	'56	976	136	2,233	—	3,345
	'61	542	278	1,914	—	2,734
	'68	609	1,811	1,675	108	4,203
Woollen	1850	446	—	107	—	553
	'56	438	—	248	—	681
	'61	398	—	464	—	862
	'68	110	—	10,370	8	10,483
Worsted	1850	76	—	—	—	76
	'56	184	—	25	—	209
	'61	175	—	—	—	175
	'68	72	—	—	—	72
Silk	1861	111	23	—	—	134
	'68	—	440	—	—	440
Flax	1850	20,438	138	545	—	21,121
	'56	21,071	1,071	6,534	77	28,753
	'61	17,375	2,417	13,818	415	33,525
	'68	28,293	6,693	21,769	295	57,050
Hemp	1868	412	—	—	—	412
Jute	1861	338	—	—	104	442
	'68	—	81	202	—	283
Hosiery	1868	—	—	—	20	20
Total	1850	21,598	138	2,951	—	24,687
	'56	22,669	1,207	9,035	77	32,988
	'61	18,939	2,718	15,696	519	37,872
	'68	29,496	9,025	34,016	426	72,963

I.—*Number of Occupiers of Land and of Owners of Live Stock; the Average Size of each Holding in 1869.*

1	2	3	4	1	2	3	4
ENGLAND.	Number of Returns Obtained from		Average Acreage of each Occupier.	ENGLAND.	Number of Returns Obtained from		Average Acreage of each Occupier.
Counties, Proper.	Occupiers of Land.	Owners of Live Stock only.		Counties, Proper.	Occupiers of Land.	Owners of Live Stock only.	
<i>South-Eastern—</i>				<i>North Midland—</i>			
Surrey	5,549	321	51	Leicester	8,350	40	55
Kent	11,543	220	63	Rutland	1,307	17	60
Sussex	8,477	86	75	Lincoln	23,908	145	61
Southampton ..	8,677	138	79	Nottingham	8,320	129	52
Berks	4,255	72	86	Derby	13,182	78	36
Total	38,501	837	69	Total	55,067	418	51
<i>South Midland—</i>				<i>North-Western—</i>			
Middlesex	2,463	632	45	Chester	13,133	153	38
Hertford	4,408	28	75	Lancaster	21,958	374	33
Buckingham	5,685	26	70	Total	35,091	527	35
Oxford	4,704	15	86				
Northampton	6,911	28	78	<i>York—</i>			
Huntingdon	2,791	7	74	East Riding	8,703	81	77
Bedford	3,892	3	65	North „	15,592	313	51
Cambridge	7,059	36	67	West „	31,709	244	36
Total	37,913	775	71	Total	56,004	638	47
<i>Eastern—</i>				<i>Northern—</i>			
Essex	10,508	100	76	Durham	6,384	93	62
Suffolk	11,030	60	68	Northumberland ..	5,422	318	123
Norfolk	18,251	100	58	Cumberland	7,536	52	69
Total	39,784	269	65	Westmorland	3,486	6	64
<i>South-Western—</i>				Total	22,828	469	78
Wiltshire	7,491	56	97	Total of England..	400,708	5,358	58
Dorset	4,760	85	94				
Devon	17,249	85	58	<i>Wales—</i>			
Cornwall	13,690	35	36	Monmouth	4,556	24	48
Somerset	16,340	68	49	North Wales	29,099	186	35
Total	59,530	279	59	South „	27,652	136	54
<i>West Midland—</i>				Total of Wales....	61,807	346	45
Gloucester	10,350	63	61	Total of Scot-			
Hereford	6,360	47	66	land	78,811	2,453	56
Salop	11,250	50	60	Total of Great			
Stafford	13,273	260	43	Britain	540,826	8,157	56
Worcester	7,226	96	53				
Warwick	7,531	630	63				
Total	55,980	1,146	56				

* See “Annual Reports” of the Registrar-General for Ireland.

II.—Population, Area, Abstract of Acreage under Crops, &c.,

	Years.	England.	Wales.	Scotland.	Total for Great Britain.
Total population	1869	20,658,	1,211,	3,205,	25,075,
Total area (in statute acres)	—	32,590,	4,734,	19,639,	56,964,
<i>Abstract of Acreage—</i>					
Under all kinds of crops, bare fallow, and grass	1868	23,039,	2,504,	4,413,	29,956,
Under corn crops (including beans and peas)	'69	23,370,	2,531,	4,438,	30,339,
Under green crops	'68	7,499,	548,	1,386,	9,433,
Under green crops	'69	7,785,	556,	1,417,	9,758,
Under green crops	'68	2,585,	128,	672,	3,386,
Under green crops	'69	2,759,	127,	688,	3,575,
„ bare fallow	'68	800,	84,	75,	958,
„ bare fallow	'69	644,	59,	36,	739,
„ grass—					
Clover, &c. under rotation	'68	2,371,	328,	1,261,	3,960,
Clover, &c. under rotation	'69	2,005,	261,	1,183,	3,449,
Permanent pasture	'68	9,704,	1,415,	1,017,	12,136,
Permanent pasture	'69	10,096,	1,527,	1,112,	12,736,
<i>Percentage of Acreage—*</i>					
Under corn crops (including beans and peas)	1868	32·5	21·9	31·4	31·5
Under corn crops (including beans and peas)	'69	33·3	22·0	31·9	32·2
Under green crops	'68	11·2	5·1	15·2	11·3
Under green crops	'69	11·8	5·0	15·5	11·8
„ bare fallow	'68	3·5	3·4	1·7	3·2
„ bare fallow	'69	2·8	2·3	0·8	2·4
„ grass—					
Clover, &c. under rotation	'68	10·3	13·1	28·6	13·2
Clover, &c. under rotation	'69	8·6	10·3	26·7	11·2
Permanent pasture	'68	42·1	56·5	23·0	40·5
Permanent pasture	'69	43·2	60·4	25·1	42·0
Total	—	100·0	100·0	100·0	100·0
<i>Abstract of Live Stock Returned—</i>					
Total number of horses (returned by occupiers of land only in Great Britain)	1869	1,142,	132,	187,	1,461,
Total number of cattle	'68	3,780,	593,	1,051,	5,424,
Total number of cattle	'69	3,707,	589,	1,018,	5,313,
„ sheep	'68	20,931,	2,668,	7,112,	30,711,
„ sheep	'69	19,822,	2,721,	6,995,	29,538,
„ pigs	'68	1,982,	187,	140,	2,308,
„ pigs	'69	1,629,	172,	129,	1,930,
<i>Number to every 100 Acres under Crops, Fallow, and Grass—</i>					
Horses	1869	4·9	5·2	4·2	4·8
Cattle.....	'68	16·4	23·7	23·8	18·1
Cattle.....	'69	15·9	23·3	22·9	14·0
Sheep.....	'68	90·8	106·6	161·2	102·5
Sheep.....	'69	84·8	107·5	157·6	95·8
Pigs	'68	8·6	7·5	3·2	7·7
Pigs	'69	7·0	6·8	2·9	6·3
<i>Number of Returns Obtained—</i>					
From occupiers of land	1868	385,	55,	80,	521,
From occupiers of land	'69	405,	57,	79,	541,
„ owners of live stock only....	'68	7,	—	2,	9,
„ owners of live stock only....	'69	5,	—	2,	8,

* Stated exclusively of the small percentages for flax and hops.

† Including under flax, 206,446 acres in 1868, and 229,178 acres in 1869.

and Number of Live Stock. [000's omitted from the quantities.]

Ireland.†	Isle of Man.	Channel Islands.		Total for United Kingdom.	Years.	
		Jersey.	Guernsey, &c.			
5,536,	148,			30,759,	1869	Total population
20,323,	180,	29,	18,	77,513,	—	Total area (in statute acres)
15,575,†	89,	19,	14,	45,652,	1868	<i>Abstract of Acreage—</i> Under all kinds of crops, bare fallow, and grass
15,644,†	84,	19,	14,	46,100,	'69	
2,193,	28,	3,	2,	11,660,	'68	Under corn crops (including beans and peas)
2,208,	29,	3,	2,	12,000,	'69	
1,456,	13,	6,	4,	4,865,	'68	Under green crops
1,469,	12,	6,	4,	5,066,	'69	
24,	—	1,	1,	984,	'68	" bare fallow
21,	—	—	1,	761,	'69	
1,692,	32,	5,	1,	5,690,	'68	" grass— Clover, &c. under rotation
1,670,	26,	4,	1,	5,149,	'69	
10,004,	14,	3,	7,	22,164,	'68	Permanent pasture
10,047,	17,	5,	6,	22,811,	'69	
14°0	31°5	18°4	15°4	25°5	1868	<i>Percentage of Acreage—*</i> Under corn crops (including beans and peas)
14°1	33°8	17°9	15°4	26°3	'69	
9°4	15°0	30°8	26°6	10°6	'68	Under green crops
9°4	14°8	30°7	27°4	11°0	'69	
°2	°5	4°0	5°8	2°2	'68	" bare fallow
°1	°5	2°7	4°5	1°7	'69	
10°9	36°7	27°8	5°5	12°5	'68	" grass— Clover, &c. under rotation
10°7	29°9	21°4	5°2	11°2	'69	
64°2	16°2	19°0	46°7	48°6	'68	Permanent pasture
64°2	20°0	27°3	47°5	49°5	'69	
100°0	100°0	100°0	100°0	100°0	—	Total
527,	5,	2,	2,	1,998	1869	<i>Abstract of Live Stock Returned—</i> Total number of horses (returned by occupiers of land only in Great Britain)
3,620,	20,	12,	7,	9,083,	'68	
3,728,	18,	12,	7,	9,078,	'69	Total number of cattle
4,822,	72,	—	1,	35,608,	'68	
4,648,	62,	1,	1,	34,250,	'69	" sheep
862,	5,	7,	6,	3,189,	'68	
1,080,	5,	7,	6,	3,028,	'69	" pigs
3°4	6°5	12°8	14°1	4°3	1869	
23°2	22°3	65°3	49°9	19°9	'68	<i>Number to every 100 Acres under Crops, Fallow, and Grass—</i> Horses
23°8	21°5	61°8	52°1	19°7	'69	
31°0	81°4	2°7	9°5	78°0	'68	Cattle
29°7	73°6	3°1	8°6	74°3	'69	
5°5	6°0	38°1	40°4	7°0	'68	Sheep
7°0	5°5	37°7	46°3	6°6	'69	
594,	2,	—	—	—	1868	<i>Number of Returns Obtained—</i> From occupiers of land
—	2,	—	—	—	'69	
—	—	—	—	—	'68	From owners of live stock only
—	—	—	—	—	'69	

† The detailed returns for Ireland will be found in the annual reports prepared by the Registrar-General and laid before Parliament.

III.—*Acres under Crops and Grass*

[000's omitted, consequently 2,915, = 2,915,000.]

1	2	3	4 5 6 7 8				9	10	11	
ENGLAND. — Counties, Proper.	Popula- tion (1869), Middle of Year.	Total Area in Statute Acres.	Number of Acres under Crops and Grass.					Per- centage of Corn Crops to Total under all kinds of Crops, Bare Fallow, and Grass.	HORSES. — Number to every 100 Acres under Crops, Bare Fallow, and Grass.	CATTLE. — Number to every 100 Acres under Crops, Bare Fallow, and Grass.
			Total under all kinds of Crops, Bare Fallow, and Grass.	Whereof under						
				Corn Crops.	Green Crops.	Clover and Artifi- cial and other Grasses under Rota- tion.	Perma- nent Pasture, and Grass not broken up in Rotation (exclusive of Heath or Mountain Land).			
<i>South-Eastern—</i>										
Surrey	966,	479,	233,	101,	41,	22,	104,	35·7	6·1	13·6
Kent	888,	1,039,	722,	254,	79,	40,	298,	35·2	4·5	8·7
Sussex	383,	937,	637,	217,	73,	53,	256,	34·1	4·5	13·8
Southampton ..	549,	1,070,	686,	267,	137,	103,	154,	38·9	4·6	7·7
Berks	179,	451,	367,	152,	59,	33,	115,	41·5	4·9	8·5
Total	2,915,	3,976,	2,695,	991,	389,	251,	927,	36·8	4·8	10·2
<i>South Midland—</i>										
Middlesex	2,481,	180,	111,	20,	11,	2,	77,	18·3	6·3	19·3
Hertford	176,	391,	330,	157,	46,	22,	90,	47·4	4·8	7·9
Buckingham	170,	467,	396,	143,	36,	20,	188,	36·0	4·8	14·9
Oxford	169,	473,	404,	168,	56,	35,	138,	41·7	4·9	11·4
Northampton ..	238,	630,	539,	191,	42,	20,	269,	35·4	4·4	18·5
Huntingdon	64,	230,	207,	103,	20,	9,	59,	49·8	4·7	11·2
Bedford	143,	296,	251,	121,	33,	11,	75,	48·0	4·7	10·4
Cambridge	171,	525,	470,	266,	75,	32,	77,	56·6	5·4	8·0
Total	3,612,	3,192,	2,708,	1,169,	319,	151,	973,	43·2	4·9	12·5
<i>Eastern—</i>										
Essex	482,	1,061,	800,	428,	105,	52,	170,	53·5	5·5	8·0
Suffolk	384,	948,	751,	397,	127,	58,	147,	52·8	6·0	7·2
Norfolk	427,	1,354,	1,053,	486,	205,	131,	223,	46·1	5·8	8·9
Total	1,193,	3,363,	2,604,	1,311,	437,	241,	540,	50·3	5·8	8·1
<i>South-Western—</i>										
Wilts	245,	865,	725,	225,	107,	67,	308,	31·1	3·5	11·0
Dorset	190,	632,	447,	115,	59,	42,	222,	25·6	3·9	14·9
Devon	592,	1,657,	1,010,	302,	144,	115,	398,	29·9	5·1	20·2
Cornwall	376,	874,	491,	151,	56,	106,	144,	30·8	6·4	20·6
Somerset	441,	1,047,	795,	157,	66,	43,	518,	19·8	4·4	23·1
Total	1,844,	5,075,	3,468,	950,	432,	373,	1,590,	27·4	4·6	19·6
<i>West Midland—</i>										
Gloucester	503,	805,	633,	186,	65,	72,	300,	29·4	4·5	16·6
Hereford	129,	535,	417,	110,	36,	32,	226,	26·3	5·2	17·1
Salop	248,	826,	670,	184,	66,	60,	348,	27·4	4·8	18·1
Stafford	874,	729,	575,	138,	46,	37,	348,	23·2	4·4	21·2
Worcester	331,	472,	383,	130,	33,	23,	183,	34·0	5·5	12·7
Warwick	638,	564,	473,	159,	32,	27,	240,	33·6	4·5	16·9
Total	2,723,	3,931,	3,151,	902,	278,	251,	1,645,	28·6	4·8	17·4

* For the Irish Statistics,

and Number of Live Stock in 1869.

[000's omitted, consequently 2,915, = 2,915,000.]

13	13	14	15	16	17	18	19	20	21	22	23	24
SHEEP.	Pres.	Number of Acres Under										ENGLAND. — Counties, Proper.
Number to every 100 Acres under Crops, Bare Fallow, and Grass.	Number to every 100 Acres under Crops, Bare Fallow, and Grass.	Wheat.	Barley or Bere.	Oats.	Beans.	Peas.	Potatoes.	Turnips and Swedes.	Man- gold.	Vetches, Lucerne, and any other Crops except Clover and Grass.	Bare Fallow, and Uncropped Arable Land.	
41'3	9'6	46,	17,	26,	3,	7,	4,	20,	7,	8,	13,	<i>South-Eastern</i> Surrey Kent Sussex Southampton. Berks
142'0	6'4	111,	41,	54,	24,	23,	14,	32,	8,	19,	12,	
92'6	5'7	105,	24,	64,	9,	14,	4,	35,	8,	17,	28,	
94'9	8'7	116,	65,	66,	6,	12,	5,	94,	9,	23,	21,	
94'0	8'5	65,	38,	26,	14,	8,	1,	40,	4,	10,	8,	
101'3	7'4	443,	185,	236,	56,	64,	28,	221,	36,	77,	82,	Total
38'7	11'5	9,	2,	6,	1,	2,	3,	2,	2,	3,	1,	<i>South Midland</i> Middlesex Hertford Buckingham Oxford Northampton. Huntingdon Bedford Cambridge
63'0	7'8	62,	46,	28,	12,	9,	2,	28,	5,	9,	15,	
84'7	8'0	61,	29,	26,	18,	9,	2,	22,	4,	7,	10,	
96'6	8'2	63,	51,	24,	18,	11,	2,	41,	4,	7,	7,	
105'1	5'2	82,	52,	19,	25,	13,	2,	27,	5,	7,	17,	
78'1	8'8	49,	20,	11,	15,	7,	3,	4,	4,	5,	15,	
76'2	8'8	53,	29,	10,	20,	8,	4,	14,	4,	7,	12,	
68'1	7'9	131,	55,	38,	31,	11,	10,	20,	16,	16,	19,	
81'8	7'8	510,	284,	162,	140,	70,	28,	158,	44,	61,	96,	Total
57'2	9'2	192,	105,	47,	48,	34,	10,	30,	29,	30,	44,	<i>Eastern—</i> Essex Suffolk Norfolk
69'3	11'2	155,	137,	18,	44,	34,	2,	63,	37,	21,	21,	
76'7	6'5	208,	194,	37,	17,	27,	7,	143,	38,	12,	7,	
68'6	8'7	550,	436,	102,	109,	95,	19,	236,	104,	63,	72,	Total
111'6	7'8	103,	65,	33,	14,	9,	4,	69,	4,	21,	18,	<i>South-Western</i> Wilts Dorset Devon Cornwall Somerset
122'5	7'7	47,	39,	20,	3,	4,	3,	42,	4,	7,	8,	
94'9	8'0	129,	82,	88,	1,	2,	18,	84,	21,	7,	50,	
84'8	10'5	55,	52,	44,	—	—	8,	30,	9,	1,	34,	
94'9	9'7	78,	35,	28,	17,	4,	10,	36,	11,	6,	10,	
100'5	8'6	412,	273,	208,	35,	19,	43,	261,	49,	42,	120,	Total
77'7	8'2	96,	42,	17,	19,	11,	6,	43,	4,	11,	10,	<i>West Midland</i> Gloucester Hereford Salop Stafford Worcester Warwick
88'2	5'6	61,	21,	12,	9,	7,	3,	27,	1,	5,	8,	
72'9	7'5	90,	52,	26,	6,	8,	7,	53,	3,	3,	11,	
56'1	8'0	59,	30,	31,	4,	6,	10,	28,	3,	4,	10,	
66'9	8'8	72,	19,	7,	22,	10,	6,	16,	4,	7,	11,	
84'6	7'6	80,	27,	15,	25,	12,	3,	20,	4,	5,	14,	
73'7	7'7	458,	191,	108,	85,	54,	35,	187,	19,	35,	64,	Total

III.—*Acreage under Crops and Grass and*

[000's omitted, consequently 2,915, = 2,915,000.]

1	2	3	4 5 6 7 8				9	10	11	
ENGLAND. — Counties, Proper.	Popula- tion (1869), Middle of Year.	Total Area in Statute Acres.	Number of Acres under Crops and Grass.					Per- centage of Corn Crops to Total under all kinds of Crops, Bare Fallow, and Grass.	HORSES — Number to every 100 Acres under Crops, Bare Fallow, and Grass.	CATTLE — Number to every 100 Acres under Crops, Bare Fallow, and Grass.
			Total under all kinds of Crops, Bare Fallow, and Grass.	Whereof under			Perma- nent Pasture, and Grass not broken up in Rotation (exclusive of Heath or Mountain Land).			
				Corn Crops.	Green Crops.	Clover and Artifi- cial and other Grasses under Rota- tion.				
<i>North Midland—</i>										
Leicester	241,	514,	458,	120,	28,	17,	283,	26·1	4·5	25·3
Rutland	21,	96,	79,	28,	8,	4,	37,	35·5	4·6	18·7
Lincoln	412,	1,776,	1,435,	628,	229,	131,	419,	43·8	4·8	13·1
Nottingham	311,	526,	436,	169,	54,	41,	156,	38·8	5·1	16·3
Derby	375,	659,	480,	85,	23,	26,	337,	17·7	4·5	25·5
Total	1,360,	3,571,	2,888,	1,030,	342,	219,	1,232,	35·6	4·7	17·8
<i>North-Western—</i>										
Chester	544,	707,	502,	98,	37,	40,	324,	19·6	4·6	27·1
Lancaster	2,783,	1,219,	722,	107,	56,	55,	499,	14·8	5·3	28·3
Total	3,327,	1,926,	1,224,	205,	93,	95,	823,	16·7	5·0	27·8
<i>York—</i>										
West Riding....	1,657,	1,709,	1,141,	268,	105,	59,	685,	23·5	5·3	19·5
East „	298,	771,	669,	289,	110,	77,	167,	43·1	6·1	11·5
North „	270,	1,350,	799,	230,	79,	57,	398,	28·8	5·3	18·3
Total	2,225,	3,830,	2,609,	787,	294,	193,	1,250,	30·2	5·5	17·0
<i>Northern—</i>										
Durham	624,	623,	398,	108,	35,	34,	196,	27·1	4·6	14·5
Northumber- land	375,	1,249,	666,	153,	63,	77,	352,	23·0	3·1	13·0
Cumberland	211,	1,001,	517,	112,	51,	89,	257,	21·7	4·2	22·7
Westmorland	62,	485,	223,	23,	11,	16,	171,	10·4	3·5	24·9
Total	1,272,	3,358,	1,804,	396,	160,	216,	976,	21·8	3·7	17·6
Total of Eng- land	20,471,	32,222,	23,151,	7,741,	2,744,	1,990,	9,956,	33·4	4·9	15·9
<i>Wales—</i>										
Monmouth	188,	368,	219,	44,	15,	15,	140,	20·1	5·2	17·7
South Wales....	775,	2,732,	1,508,	311,	66,	135,	960,	20·6	5·3	21·9
North „	436,	2,003,	1,023,	245,	61,	126,	568,	23·8	5·1	25·2
Total of Wales	1,399,	5,103,	2,750,	600,	142,	276,	1,668,	21·9	5·2	22·9
Total of Scot- land	3,205,	19,639,	4,438,	1,417,	689,	1,183,	1,112,	31·9	4·2	22·9
Total of Great Britain	25,075,	56,964,	30,839,	9,758,	3,575,	3,449,	12,736,	32·1	4·8	14·0

* For the Irish Statistics,

Number of Live Stock in 1869—Contd.

[000's omitted, consequently 2,915, = 2,915,000.]

12	13	14	15	16	17	18	19	20	21	22	23	24
SHEEP.	Figs.	Number of Acres Under										ENGLAND. — Counties, Proper.
Number to every 100 Acres under Crops, Bare Fallow, and Grass.	Number to every 100 Acres under Crops, Bare Fallow, and Grass.	Wheat.	Barley or Bere.	Oats.	Beans.	Peas.	Potatoes.	Turnips and Swedes.	Man-gold.	Vetches, Lucerne, and any other Crops except Clover and Grass.	Bare Fallow, and Uncropped Arable Land.	
100·2	5·3	49,	31,	22,	11,	7,	2,	16,	4,	4,	11,	<i>North Midland</i> Leicester Rutland Lincoln Nottingham Derby
142·2	3·6	11,	10,	4,	2,	2,	—	6,	—	1,	2,	
110·6	5·6	311,	144,	109,	34,	28,	42,	136,	15,	18,	26,	
72·7	5·3	74,	47,	21,	12,	12,	6,	37,	4,	6,	17,	
53·4	7·1	36,	14,	31,	2,	2,	3,	13,	1,	3,	9,	
96·0	5·7	481,	246,	187,	61,	51,	53,	208,	24,	32,	65,	Total
26·1	10·2	42,	4,	46,	4,	—	25,	8,	2,	1,	3,	<i>North-Western</i> Chester Lancaster
40·8	4·6	41,	7,	52,	4,	—	41,	11,	1,	2,	5,	
34·8	7·0	83,	11,	98,	8,	—	66,	19,	3,	3,	8,	Total
64·5	4·6	114,	66,	61,	15,	10,	29,	62,	2,	9,	20,	<i>York—</i> West Riding East " North "
80·8	6·0	181,	48,	79,	17,	12,	12,	76,	3,	9,	24,	
87·4	5·8	87,	56,	69,	11,	6,	13,	58,	1,	4,	33,	
75·7	5·2	332,	170,	209,	43,	28,	54,	196,	6,	22,	77,	Total
51·0	2·4	48,	12,	40,	4,	3,	8,	23,	—	4,	25,	<i>Northern—</i> Durham Northum-berland Cumberland Westmorland.
34·2	1·8	46,	30,	66,	6,	5,	6,	52,	—	4,	21,	
92·5	4·7	29,	11,	71,	—	—	13,	35,	1,	1,	8,	
147·4	1·9	3,	3,	17,	—	—	2,	9,	—	—	1,	
105·5	2·7	126,	56,	194,	10,	8,	29,	119,	1,	9,	55,	Total
84·8	7·0	3,395,	1,851,	1,504,	547,	389,	355,	1,605,	286,	344,	639,	{ Total of Eng-land
91·9	6·4	22,	12,	8,	1,	2,	2,	10,	1,	2,	5,	<i>Wales—</i> Monmouth South Wales North "
99·8	5·9	66,	99,	143,	—	1,	25,	37,	3,	3,	35,	
109·1	8·0	69,	59,	110,	4,	2,	24,	30,	2,	3,	24,	
6·8	6·7	157,	170,	261,	5,	5,	51,	77,	6,	8,	64,	Total of Wales
157·6	2·9	136,	230,	1,018,	23,	2,	179,	490,	1,	14,	36,	{ Total of Scot-land
95·8	6·3	3,688,	2,251,	2,783,	575,	396,	585,	2,172,	293,	366,	739,	{ Total of Gt. Britain

see Table II, p. 189.

Trade of United Kingdom, 1869-68-67.—*Distribution of Exports* from United Kingdom, according to the Declared Real Value of the Exports; and the Computed Real Value (Ex-duty) of Imports at Port of Entry, and therefore including Freight and Importer's Profit.*

Merchandise (excluding Gold and Silver), Imported from, and Exported to, the following Foreign Countries, &c. [000's omitted.]	First Nine Months.					
	1869.		1868.		1867.	
	Imports from £	Exports to £	Imports from £	Exports to £	Imports from £	Exports to £
I.—FOREIGN COUNTRIES:						
Northern Europe; viz., Russia, Sweden, Norway, Denmark & Iceland, & Heligoland	14,521,	7,285,	18,735,	5,199,	19,785,	5,412,
Central Europe; viz., Prussia, Germany, the Hanse Towns, Holland, and Belgium	28,253,	28,968,	25,152,	27,747,	26,164,	25,310,
Western Europe; viz., France, Portugal (with Azores, Madeira, &c.), and Spain (with Gibraltar and Canaries)	31,553,	12,343,	31,301,	11,542,	30,813,	13,166,
Southern Europe; viz., Italy, Austrian Empire, Greece, Ionian Islands, and Malta	5,438,	6,776,	5,023,	5,333,	3,690,	5,660,
Levant; viz., Turkey, with Wallachia and Moldavia, Syria and Palestine, and Egypt	17,020,	11,481,	18,343,	10,278,	15,390,	11,302,
Northern Africa; viz., Tripoli, Tunis, Algeria and Morocco	304,	235,	219,	191,	204,	221,
Western Africa	900,	651,	1,259,	672,	1,034,	639,
Eastern Africa; with African Ports on Red Sea, Aden, Arabia, Persia, Bourbon, and Kooria Moorla Islands	64,	117,	34,	115,	46,	84,
Indian Seas, Siam, Sumatra, Java, Philip- pines; other Islands	1,710,	1,002,	1,447,	1,863,	629,	1,787,
South Sea Islands	2,	18,	37,	35,	9,	20,
China, including Hong Kong	6,162,	7,419,	6,631,	7,127,	5,940,	6,161,
United States of America	30,130,	19,400,	34,897,	16,523,	33,032,	17,756,
Mexico and Central America	1,070,	573,	768,	775,	853,	625,
Foreign West Indies and Hayti	4,014,	1,241,	3,964,	2,394,	4,092,	2,503,
South America (Northern), New Granada, Venezuela, and Ecuador	1,040,	2,034,	990,	2,021,	980,	1,977,
" (Pacific), Peru, Bolivia, Chili, and Patagonia	4,440,	2,418,	5,662,	2,156,	5,826,	3,207,
" (Atlantic) Brazil, Uruguay, and Buenos Ayres	6,816,	7,460,	7,242,	5,576,	6,510,	7,387,
Whale Fisheries; Grnld., Davis' Straits, South. Whale Fishery, & Falkland Islands	55,	5,	70,	10,	74,	8,
Total—Foreign Countries	153,492,	109,426,	161,774,	99,057,	155,071,	103,178,
II.—BRITISH POSSESSIONS:						
British India, Ceylon, and Singapore	25,192,	14,864,	21,468,	18,156,	20,954,	17,710,
Austral. Cols.—N. So. W., Vict., and Queensld.	7,228,	7,006,	7,609,	5,918,	7,687,	4,868,
" " So. Aus., W. Aus., Tasm., and N. Zealand	2,926,	2,464,	2,846,	2,135,	3,361,	2,095,
British North America	3,802,	4,732,	3,211,	4,350,	3,531,	5,424,
" W. Indies with Btsh. Guiana & Honduras	5,359,	1,831,	5,721,	1,875,	5,163,	1,782,
Cape and Natal	1,864,	1,177,	1,730,	1,169,	1,770,	1,501,
Br. W. Co. of Af., Ascension and St. Helena	395,	479,	317,	413,	338,	477,
Mauritius	462,	270,	832,	312,	715,	313,
Channel Islands	356,	458,	302,	419,	290,	354,
Total—British Possessions	47,584,	33,281,	44,036,	34,747,	43,809,	34,024,
General Total	£ 201,076,	142,707,	205,810,	133,804,	198,880,	137,202,

* i.e., British and Irish produce and manufactures.

IMPORTS.—(United Kingdom. —Whole Years, 1869-68-67-66-65.—*Computed Real Value (Ex-duty), at Port of Entry (and therefore including Freight and Importer's Profit), of Articles of Foreign and Colonial Merchandise Imported into the United Kingdom.*

(Whole Years.) [000's omitted.] FOREIGN ARTICLES IMPORTED.		1869.	1868.	1867.	1866.	1865.
		£	£	£	£	£
RAW MATLS.— <i>Textile.</i>	Cotton Wool	56,852,	55,199,	51,998,	77,521,	66,032,
	Wool (Sheep's) ..	14,940,	15,304,	16,461,	17,959,	15,367,
	Silk	18,289,	19,349,	16,128,	15,896,	18,135,
	Flax	4,179,	5,098,	4,180,	4,469,	5,370,
	Hemp	4,122,	4,030,	3,080,	3,215,	3,581,
	Indigo	3,083,	2,854,	2,422,	2,208,	2,004,
		101,465,	101,834,	94,269,	121,268,	110,439,
	" " <i>Various.</i> Hides	3,299,	3,624,	3,070,	3,342,	3,044,
	Oils	4,340,	4,035,	4,086,	4,482,	4,311,
	Metals	5,336,	5,198,	4,627,	4,953,	5,185,
" " <i>Agricoll.</i>	Tallow	2,770,	2,944,	2,419,	3,009,	3,125,
	Timber.....	10,109,	10,279,	9,322,	10,459,	11,501,
		25,854,	26,080,	23,524,	26,245,	27,166,
	Guano	2,641,	1,977,	2,109,	1,448,	2,676,
	Seeds	3,647,	4,348,	3,260,	3,375,	4,983,
		6,288,	6,325,	5,369,	4,823,	6,659,
	TROPICAL & C., PRODUCE. Tea	10,319,	12,431,	10,068,	11,130,	10,004,
	Coffee	4,927,	4,858,	4,362,	4,088,	4,604,
	Sugar & Molasses	15,928,	15,024,	13,091,	12,204,	13,002,
	Tobacco	2,250,	2,410,	2,380,	2,627,	3,250,
" " <i>Agricoll.</i>	Rice	2,837,	2,895,	2,026,	1,539,	1,331,
	Fruits	2,804,	2,513,	1,474,	1,267,	1,371,
	Wines	5,266,	5,441,	4,835,	4,733,	3,914,
	Spirits	2,012,	2,086,	2,070,	2,101,	1,508,
		46,343,	47,658,	40,306,	39,689,	39,024,
	FOOD Grain and Meal.	37,252,	39,228,	41,084,	29,802,	20,643,
	Provisions	16,203,	13,859,	9,690,	10,463,	10,295,
		53,455,	53,087,	50,774,	40,265,	30,938,
	Remainder of Enumerated Articles	17,212,	14,632,	6,620,	6,424,	5,525,
	TOTAL ENUMERATED IMPORTS	250,617,	249,616,	220,862,	238,714,	219,751,
" " <i>Agricoll.</i>	Add for UNENUMERATED IMPORTS (say)	62,654,	62,404,	54,215,	59,678,	54,937,
	TOTAL IMPORTS	313,271,	312,020,	275,077,	298,392,	274,688,

EXPORTS.—(United Kingdom).—Whole Years, 1869-68-67-66-65.—Declared Real Value, at Port of Shipment, of Articles of BRITISH and IRISH Produce and Manufactures Exported from United Kingdom.

(Whole Years.) BRITISH PRODUCE, &c., EXPORTED.		1869.	1868.	1867.	1866.	1865.
		£	£	£	£	£
MANFRES.—Textile.	Cotton Manufactures ..	53,002,	52,832,	55,973,	60,865,	46,904,
	" Yarn	14,158,	14,709,	14,871,	13,700,	10,351,
	Woollen Manufactures	22,625,	19,526,	20,134,	21,726,	20,102,
	" Yarn	5,858,	6,376,	5,822,	4,734,	5,424,
	Silk Manufactures.....	2,049,	2,107,	1,603,	1,698,	1,884,
	" Yarn	213,	215,	179,	248,	294,
	Linen Manufactures	6,798,	7,094,	7,473,	9,576,	8,155,
	" Yarn	2,329,	2,309,	2,454,	2,880,	2,505,
		107,032,	105,168,	108,509,	114,927,	96,619,
	Sewed. Apparel	2,405,	2,290,	2,208,	2,877,	2,640,
	Habandy. and Millnry.	4,583,	4,476,	4,438,	5,403,	5,014,
		6,988,	6,766,	6,646,	8,280,	7,654,
METALS	Hardware	4,413,	3,846,	3,934,	4,378,	4,334,
	Machinery	5,102,	4,724,	4,964,	4,749,	5,214,
	Iron	19,519,	15,022,	15,127,	14,829,	13,451,
	Copper and Brass.....	3,586,	3,210,	3,273,	2,831,	3,166,
	Lead and Tin	4,186,	3,600,	3,318,	3,169,	2,847,
	Coals and Culm	5,069,	5,356,	5,400,	5,084,	4,432,
		41,875,	35,758,	36,016,	35,040,	33,444,
Ceramic Manufcts.	Earthenware and Glass	2,664,	2,432,	2,435,	2,454,	2,186,
Indigenous Manfrs.	Beer and Ale.....	1,896,	1,866,	1,910,	2,066,	2,060,
	Butter	270,	272,	266,	361,	334,
	Cheese	110,	103,	128,	164,	111,
	Candles	161,	202,	188,	222,	109,
	Salt	431,	485,	451,	378,	276,
	Spirits	209,	169,	163,	151,	245,
	Soda	1,379,	1,505,	1,615,	1,611,	1,125,
		4,456,	4,602,	4,516,	4,943,	4,260,
Various Manufcts.	Books, Printed	675,	686,	613,	602,	517,
	Furniture	243,	200,	200,	237,	290,
	Leather Manufactures	2,631,	2,435,	1,858,	2,043,	2,462,
	Soap	216,	257,	289,	241,	184,
	Plate and Watches	507,	409,	417,	413,	404,
	Stationery	497,	418,	378,	389,	403,
		4,769,	4,405,	3,755,	3,925,	4,260,
Remainder of Enumerated Articles		12,335,	11,252,	10,542,	10,664,	9,703,
Unenumerated Articles.....		9,926,	9,080,	8,565,	8,595,	7,736,
TOTAL EXPORTS.....		190,045,	179,463,	181,184,	188,828,	165,862,

SHIPPING.—FOREIGN TRADE.—(United Kingdom.)—Years 1869-68-67-66.—
Vessels Entered and Cleared with Cargoes, including repeated Voyages, but
excluding Government Transports.

(Whole Years.)	1869.			1868.		1867.		1866.	
	Vessels.	Tonnage (000's omitted.)	Average Tonnage	Vessels.	Tonnage (000's omitted.)	Vessels.	Tonnage (000's omitted.)	Vessels.	Tonnage (000's omitted.)
ENTERED:—									
<i>Vessels belonging to—</i>	No.	Tons.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.
Russia	652	230,	353	567	190,	522	188,	475	172,
Sweden	1,337	237,	177	1,266	228,	1,151	213,	1,126	211,
Norway	4,392	1,080,	246	4,154	1,018,	4,086	979,	3,903	939,
Denmark	2,279	275,	121	2,356	274,	2,159	255,	2,261	244,
Prussia and Ger. Sts.	3,152	654,	207	3,455	690,	3,147	622,	4,141	1,018,
Holland and Belgium	2,574	665,	258	2,515	679,	2,368	587,	2,031	282,
France	2,287	224,	98	2,497	230,	2,617	238,	3,067	282,
Spain and Portugal	548	181,	330	523	182,	485	159,	396	124,
Italy & other Eupn. Sts.	1,357	506,	373	864	316,	871	234,	1,185	354,
United States	394	388,	985	477	458,	439	455,	408	431,
All other States	13	5,	385	14	5,	9	5,	14	5,
United Kingdm. & } Depds.	18,985 27,597	4,445, 10,041,	234 364	18,688 27,291	4,279, 9,572,	17,854 27,050	3,985, 9,355,	19,007 27,382	4,062, 9,214,
<i>Totals Entered....</i>	46,582	14,486,	311	45,979	13,851,	44,904	13,340,	46,389	13,276,
CLEARED:—									
Russia	568	210,	370	488	171,	460	174,	425	160,
Sweden	1,283	227,	177	1,201	201,	1,105	192,	1,068	196,
Norway	2,742	578,	211	2,537	519,	2,315	472,	2,195	442,
Denmark	2,562	293,	115	2,684	306,	2,468	282,	2,367	256,
Prussia and Ger. Sts.	4,399	813,	185	4,853	866,	4,630	811,	5,391	1,252,
Holland and Belgium	2,880	799,	277	3,076	885,	2,865	776,	2,043	329,
France	3,600	434,	121	4,093	462,	4,485	501,	4,231	454,
Spain and Portugal	534	186,	348	497	181,	467	158,	376	121,
Italy & other Eupn. Sts.	1,534	602,	392	1,079	412,	1,076	377,	1,317	422,
United States	427	450,	958	608	564,	517	515,	507	514,
All other States	21	11,	524	17	6,	13	3,	24	9,
United Kingdm. & } Depds.	20,535 31,475	4,603, 11,317,	224 360	21,133 31,775	4,573, 10,902,	20,401 31,053	4,261, 10,586,	19,994 29,764	4,055, 9,952,
<i>Totals Cleared....</i>	52,010	15,920,	306	52,908	15,475,	51,454	14,857,	49,708	14,007,

GOLD AND SILVER BULLION AND SPECIE. — IMPORTED AND EXPORTED. — (United Kingdom.) — Computed Real Value for the Whole Years, 1869-68-67.

[000's omitted.]

(Whole Years.)	1869.		1868.		1867.	
	Gold.	Silver.	Gold.	Silver.	Gold.	Silver.
Imported from:—	£	£	£	£	£	£
Australia	7,893,	5,	6,990,	1,	5,802,	—
So. Amca. and W. Indies	2,829,	2,656,	1,690,	3,429,	3,424,	5,105,
United States and Cal.	1,829,	1,110,	6,976,	1,916,	5,026,	1,472,
	12,551,	3,771,	15,656,	5,346,	14,252,	6,577,
France	696,	1,792,	280,	1,045,	387,	1,001,
Hanse Towns, Holl. & Belg.	28,	976,	47,	509,	87,	194,
Prtgl., Spain, and Gbrltr.	65,	126,	470,	120,	347,	111,
Mta., Trky., and Egypt	203,	17,	77,	95,	146,	67,
China	1,	1,	—	—	—	—
West Coast of Africa	100,	1,	119,	8,	146,	3,
All other Countries....	127,	46,	487,	593,	435,	67,
Totals Imported....	13,771,	6,730,	17,136,	7,716,	15,800,	8,020,
Exported to:—						
France	4,194,	3,417,	7,190,	1,822,	6,034,	2,190,
Hanse Towns, Holl. & Belg.	38,	900,	1,111,	3,602,	308,	3,345,
Prtgl., Spain, and Gbrltr.	109,	—	650,	1,	354,	7,
	4,341,	4,317,	8,951,	5,425,	6,696,	5,542,
Ind. and China (via Egypt)	1,537,	2,361,	1,498,	1,439,	242,	647,
Danish West Indies	—	—	—	—	—	—
United States	1,050,	2,	112,	—	63,	—
South Africa	44,	—	63,	—	71,	—
Mauritius	—	—	—	—	—	—
Brazil	450,	—	1,013,	58,	306,	95,
All other Countries....	1,048,	1,242,	1,071,	590,	511,	153,
Totals Exported....	8,470,	7,922,	12,708,	7,512,	7,889,	6,437,
Excess of Imports	5,301,	—	4,428,	204,	7,911,	1,583,
„ Exports	—	1,192,	—	—	—	—

REVENUE.—(UNITED KINGDOM.)—31st DECEMBER, 1869-68-67-66.

Net Produce in YEARS and QUARTERS ended 31st DEC., 1869-68-67-66.

[000's omitted.]

QUARTERS, ended 31st Dec.	1869.	1868.	1869.		Corresponding Quarters.	
			Less.	More.	1867.	1866.
	£	£	£	£	£	£
Customs	5,740,	5,998,	258,	—	6,102,	5,964,
Excise	5,452,	5,431,	—	21,	5,092,	5,471,
Stamps	2,158,	2,220,	62,	—	2,296,	2,308,
Taxes	595,	1,287,	692,	—	1,317,	1,358,
Post Office	1,180,	1,150,	—	30,	1,180,	1,140,
	15,125,	16,086,	1,012,	51,	15,987,	16,241,
Property Tax	643,	2,018,	1,375,	—	885,	1,814,
	15,768,	18,104,	2,387,	51,	16,872,	17,555,
Crown Lands	113,	112,	—	1,	100,	95,
Miscellaneous	650,	863,	212,	—	553,	682,
<i>Totals</i>	16,531,	19,079,	2,599,	52,	17,525,	18,332,
			NET DEC. £2,547,393			

YEARS, ended 30th Dec.	1869.	1868.	1869.		Corresponding Years.	
			Less.	More.	1867.	1866.
	£	£	£	£	£	£
Customs	22,073,	22,486,	413,	—	22,630,	21,915,
Excise	20,739,	20,214,	—	525,	19,995,	20,616,
Stamps	9,365,	9,174,	—	191,	9,597,	9,291,
Taxes	2,774,	3,477,	703,	—	3,484,	3,463,
Post Office	4,700,	4,560,	—	140,	4,630,	4,375,
	59,651,	59,911,	1,116,	856,	60,296,	59,660,
Property Tax	7,531,	8,414,	883,	—	5,266,	5,458,
	67,182,	68,325,	1,999,	856,	65,562,	65,118,
Crown Lands	363,	359,	—	4,	337,	327,
Miscellaneous	3,170,	3,176,	6,	—	2,764,	3,340,
<i>Totals</i>	70,715,	71,860,	2,005,	860,	68,663,	68,785,
			NET DEC. £1,145,308			

REVENUE.—UNITED KINGDOM.—QUARTER ENDED 31ST DEC., 1869:—

An Account showing the REVENUE and other RECEIPTS in the QUARTER ended 31st of December, 1869; the ISSUES out of the same, and the Charges on the Consolidated Fund at that Date, and the Surplus or Deficiency of the Balance in the Exchequer on the 31st of December, 1869, in respect of such Charges.

Received:—

	£
Income received, as shown in Account I	16,531,702
Amount received as Advances in aid of Ways and Means	1,000,000
Amount raised by Exchequer Bonds, issued per Act 32 and 33 Vict., cap. 22	700,000
Amount received in repayment of Advances for Public Works, &c. ...	492,570
	<u>£18,724,272</u>
Excess of the Sums charged on the Consolidated Fund on the 31st of December, 1869, payable in March Quarter, 1870, above the Balance in the Exchequer at that date, viz.:—	
Excess of Charge in Great Britain	£5,830,269
Surplus over Charge in Ireland	702,511
Net deficiency	5,127,758
Charge on 31st of December, 1869	£8,921,584
Paid out of Growing Produce in December Quarter, 1869 ...	683,634
Portion of the Charge payable in March Quarter, 1870	8,237,950
To meet which there was in the Exchequer on the 31st of December, 1869	3,110,192
Net Deficiency as above	5,127,758
	<u>£23,852,030</u>

Paid:—

	£
Net Deficiency of the Balance in the Exchequer to meet the Charge on the 30th of September, 1869, as per last Account	3,689,875
Amount issued to repay Advances in aid of Ways and Means	1,000,000
Amount applied out of the Income to <i>Supply Services</i> (including 700,000 <i>l.</i> Exchequer Bonds paid off, and 300,000 <i>l.</i> for Abyssinian Expedition	10,240,571
Charge of the <i>Consolidated Fund</i> on the 31st of December, 1869, viz.:—	
Interest of the Permanent Debt	£6,084,656
Terminable Annuities	1,870,818
Interest of Exchequer Bonds	11,375
" " Bills	49,845
" Deficiency Advances	2,267
" Ways and Means Advances	2,795
The Civil List	101,313
Other Charges on Consolidated Fund	832,859
Advances for Public Works, &c.	465,656
Paid out of Growing Produce in December Quarter, 1869	£683,634
Payable in March Quarter, 1870	8,237,950
	<u>8,921,584</u>
	<u>£23,852,030</u>

**BRITISH CORN.—*Gazette Average Prices (ENGLAND AND WALES),
Fourth Quarter of 1869.***

[This Table is communicated by the Statistical and Corn Department, Board of Trade.]

Weeks ended on a Saturday, 1869.		Weekly Average. (Per Impl. Quarter.)					
		Wheat.		Barley.		Oats.	
		s.	d.	s.	d.	s.	d.
Oct.	2	49	8	37	8	24	7
"	9	48	1	38	—	24	8
"	16	47	—	38	1	24	1
"	23	46	1	38	6	24	2
"	30	46	2	38	8	23	—
<i>Average for October.....</i>		47	4	38	1	24	1
Nov.	6	47	1	38	5	23	10
"	13	46	11	38	9	23	11
"	20	46	8	38	8	23	5
"	27	45	6	38	1	23	5
<i>Average for November.....</i>		46	5	38	5	23	4
Dec.	4	44	3	37	0	22	6
"	11	43	8	36	2	22	5
"	18	43	10	36	0	22	3
"	25	43	5	35	11	21	6
<i>Average for December.....</i>		43	9	36	3	22	2
<i>Average for the quarter</i>		46	—	37	7	23	3
<i>Average for the year</i>		46	2	39	5	26	—

RAILWAYS.—PRICES, *October—December;—and* TRAFFIC, *January—December, 1869.*

[Abstract from "Heraopath's Journal" and the "Times."]

Total Capital Ex- pended Mins.	Railway.	For the (£100).			Miles Open.		Total Traffic.		Traffic pr.		Dividends per Cent.			
		Price on					52 Weeks.		52 Weeks.		for Half Years.			
		1st Dec.	1st Nov.	1st Oct.	'69.	'68.	'69.	'68.	'69.	'68.	June, '69.	Dec. '68.	June, '68.	
£					No.	No.	£	£	£	£	s.	d.	s.	d.
57,9	Load. & N. Westn.	122	119½	116	1,468	1,416	6,587,	6,394,	86	84	55	—	67	6
49,8	Great Western	56	56½	54½	1,386	1,386	4,081,	3,968,	56	55	20	—	15	—
21,3	„ Northern.....	107½	109	104½	487	487	2,114,	2,125,	83	84	42	6	75	—
29,5	„ Eastern	36½	37½	36½	746	728	1,989,	1,960,	51	50	5	—	Nil	Nil
17,6	Brighton	45	43½	43½	368	365	1,247,	1,246,	65	65	Nil	—	12	6
20,2	South-Eastern	77	77½	76	346	346	1,435,	1,422,	79	79	25	—	40	—
17,3	„ Western.....	95	91	91	521	503	1,429,	1,388,	53	53	40	—	52	6
213,6		77	76½	74½	5,322	5,231	18,882,	18,498,	68	68	26	9	37	6
34,8	Midland	119½	118½	116½	800	774	3,411,	3,075,	82	76	57	6	57	6
23,3	Lancsh. and York.	126½	124½	124½	423	411	2,513,	2,534,	115	118	67	6	67	6
16,0	Sheffield and Man.	53½	54	52½	251	251	1,174,	1,100,	89	84	20	—	25	—
40,4	North-Eastern	119½	119½	114	1,275	1,258	4,068,	3,798,	61	58	57	6	60	—
114,5		104½	104½	101½	2,749	2,694	11,166,	10,507,	78	75	50	7	52	6
22,2	Caledonian	79½	80½	83½	674	674	1,990,	1,914,	57	55	35	—	37	6
6,2	Gt. S. & Wn. Irind.	100	99	99	419	419	—	—	—	—	50	—	45	—
356,5	Gen. aver.	87	85½	85½	9,164	9,018	—	—	—	—	36	7	42	7

Consols.—Money Prices, 1st Dec., 93½ to ½.—1st Nov., 93½ to ½.—1st Oct., 92½ to 93.

Exchequer Bills.—1st Dec., par. to 5s. pm.—1st Nov., par. to 5s. pm.—1st Oct., par. to 5s. pm.

BANK OF ENGLAND.—WEEKLY RETURN.

Pursuant to the Act 7th and 8th Victoria, c. 32 (1844), for Wednesday in each Week, during the FOURTH QUARTER (Oct.—Dec.) of 1869.

[0,000's omitted.]

ISSUE DEPARTMENT.					COLLATERAL COLUMNS.	
Liabilities.		Assets.			Notes in Hands of Public. (Col. 1 minus col. 16.)	Minimum Rates of Discount at Bank of England.
Notes Issued.	DATES. (Wednesdays.)	Government Debt.	Other Securities.	Gold Coin and Bullion.		
£		£	£	£	£	
Mins.	1869.	Mins.	Mins.	Mins.	Mins.	1870. Per ann.
33,63	Oct. 6	11,01	3,98	18,63	24,27	19 Aug. 2½ p.ct.
33,16	" 13	11,01	3,98	18,16	24,21	
32,89	" 20	11,01	3,98	17,89	23,94	4 Nov. 3 "
32,88	" 27	11,01	3,98	17,88	23,56	
32,66	Nov. 3	11,01	3,98	17,66	24,06	
32,30	" 10	11,01	3,98	17,30	23,56	
32,48	" 17	11,01	3,98	17,48	23,15	
32,56	" 24	11,01	3,98	17,56	22,83	
32,50	Dec. 1	11,01	3,98	17,50	23,18	
32,78	" 8	11,01	3,98	17,78	22,87	
33,26	" 15	11,01	3,98	18,26	22,40	
33,32	" 22	11,01	3,98	18,32	22,66	
33,29	" 29	11,01	3,98	18,29	22,90	

BANKING DEPARTMENT.

8	9	10		11	12	13	14	15	16	17	18
Liabilities.						DATES. (Wednesdays.)	Assets.				Totals of Liabili- ties and Assets.
Capital and Rest.		Deposits.		Seven Day and other Bills.	Securities.		Reserve.				
Capital.	Rest.	Public.	Private.		Government.		Other.	Notes.	Gold and Silver Coin.		
£	£	£	£	£	1869.	£	£	£	£	£	
Mins.	Mins.	Mins.	Mins.	Mins.	Oct. 6	Mins.	Mins.	Mins.	Mins.	Mins.	
14,55	3,07	3,97	19,64	,67	15,21	16,38	9,36	85	41,80		
14,55	3,07	3,49	18,48	,60	15,21	15,08	8,95	96	40,20		
14,55	3,10	3,55	18,17	,58	15,21	14,85	8,95	94	39,95		
14,55	3,10	3,51	17,85	,57	15,51	14,85	9,32	91	39,59		
14,55	3,09	3,36	17,63	,62	Nov. 3	14,01	15,72	8,60	93	39,26	
14,55	3,10	3,51	17,85	,59	10	13,81	16,09	8,74	97	39,61	
14,55	3,11	4,00	17,91	,58	17	13,81	16,09	9,33	92	40,15	
14,55	3,11	4,23	17,80	,58	24	13,81	15,91	9,73	1,06	40,46	
14,55	3,08	4,47	17,66	,56	Dec. 1	13,81	16,17	9,32	1,02	40,32	
14,55	3,07	5,34	17,60	,53	8	13,81	16,40	9,91	98	41,10	
14,55	3,08	6,77	17,24	,50	15	13,81	16,58	10,86	90	42,15	
14,55	3,09	8,07	17,32	,60	22	13,81	18,09	10,66	92	43,48	
14,55	3,10	8,58	18,20	,45	29	13,81	19,78	10,39	91	44,89	

LONDON CLEARING; CIRCULATION, PRIVATE AND PROVINCIAL.

The London Clearing, and the Average Amount of Promissory Notes in Circulation in ENGLAND and WALES on Saturday in each Week during the FOURTH QUARTER (October—December) of 1869; and in SCOTLAND and IRELAND, at the Three Dates, as under.

[0,000's omitted.]

ENGLAND AND WALES.					SCOTLAND.				IRELAND.		
DATES.	London: Cleared in each Week ended Wednesday.*	Private Banks. (Fixed Issues, 4,04).	Joint Stock Banks. (Fixed Issues, 2,74).	TOTAL. (Fixed Issues, 6,78).	Weeks ended	£5 and upwards.	Under £5.	TOTAL. (Fixed Issues, 2,75).	£5 and upwards.	Under £5.	TOTAL. (Fixed Issues, 6,35).
1869.	£	£	£	£	1869.	£	£	£	£	£	£
Oct.* 2	53,27	2,74	2,38	5,12	Oct. 9	1,77	2,95	4,72	3,49	3,17	6,66
" 9	83,87	2,86	2,44	5,30							
" 16	65,70	2,92	2,46	5,38							
" 23	76,85	2,91	2,42	5,33							
" 30	58,48	2,87	2,41	5,28							
Nov. 6	72,42	2,83	2,40	5,23	Nov. 6	1,88	2,99	4,87	3,85	3,53	7,38
" 13	67,86	2,80	2,40	5,20							
" 20	75,22	2,77	2,38	5,15							
" 27	57,47	2,73	2,36	5,09							
Dec. 4	77,32	2,70	2,33	5,03	Dec. 4	2,02	3,27	5,29	3,76	3,59	7,35
" 11	72,31	2,66	2,27	4,93							
" 18	75,59	2,68	2,28	4,96							
" 25	67,13	2,65	2,29	4,94							

* The Wednesdays preceding the Saturdays.

FOREIGN EXCHANGES.—*Quotations as under, LONDON on Paris, Hamburg and Calcutta;—and New York, Calcutta, Hong Kong and Sydney, on LONDON—with collateral cols.*

1	2	3	4	5	6	7	8	9	10	11	12
DATES.	Paris.				London on Hamburg.	New York.	Calcutta.		Hong Kong.	Syd- ney.	Standard Silver in bars in London. pr. oz.
	London on Paris.	Bullion as Arbitrated.		Prem. or Dis. on Gold per Mille.			India Council.	At Calcutta on London.			
		Agnat. Engd.	For Engd.								
3 m. d.				3 m. d.	60 d. s.	60 d. s.	6 m. d.	6 m. s.	30 d. s.		
1869.		pr. ct.	pr. ct.			pr. ct.	d.	d.	d.	pr. ct.	d.
Oct. 2.	25·37½	—	—	—	13·11½	10½	23½	23½	53½	1 pm.	60½
" 16.	"	—	—	—	½	109½	"	" ½	54	"	"
Nov. 6.	"	—	—	—	·11	108½	" ½	" ½	"	"	" ½
" 20.	"	—	—	—	·15½	109	"	" ½	" ½	"	" ½
Dec. 4.	"	—	—	—	·11	108½	"	" ½	"	"	" ½
" 18.	·40	—	—	—	"	"	" ½	" ½	"	"	"

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August-29-

JOURNAL
OF THE
STATISTICAL SOCIETY
OF
LONDON.



12, ST. JAMES'S SQUARE, S.W.

PUBLISHED QUARTERLY. VOL. XXXIII.—PART II.

JUNE, 1870.

LONDON:
EDWARD STANFORD, 6, CHARING CROSS, S.W.

PRICE FIVE SHILLINGS.

STATISTICAL SOCIETY.

COUNCIL AND OFFICERS.—1870-71.

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FREDERICK PURDY.

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JOURNAL OF THE STATISTICAL SOCIETY,

JUNE, 1870.

REPORT of the COUNCIL for the FINANCIAL YEAR ended 31st December, 1869, and for the SESSIONAL YEAR ended with June, 1870, presented at the THIRTY-SIXTH ANNIVERSARY MEETING of the STATISTICAL SOCIETY, held at the Society's Rooms, 12, St. James's Square, on Thursday, 23rd June, 1870; with the PROCEEDINGS of that Meeting.

THE PRESIDENT, WILLIAM NEWMARCH, Esq., F.R.S., in the Chair.

THE Council have the pleasure of laying before the Fellows a report of the proceedings of the past Sessional Year 1869-70, the *thirty-sixth* of the Society's existence.

- Observing, first, that in consequence of the recent alteration in Law 15 of the Society, the Anniversary Meeting is held in June instead of March, as heretofore.

The changes which have taken place in the Fellowship during 1867, 1868, and 1869, are displayed by the subjoined statements:—

	1869.	1868.	1867.
Number of Fellows on 31st of December	400	387	371
Life Members included in above	62	62	63
Members lost during year by death or withdrawal	24	18	21
New Members elected	37	34	28

The financial position of the Society for the years ended on the 31st December, 1868 and 1869, is briefly shown by the following figures:—

	1869.	1868.
	£	£
Balance at beginning of year	216	146
Receipts from all sources	809	796
Cash balance at end of year	200	216
Surplus of assets over liabilities at end of year	1,962	1,877

The subjects brought before the ordinary meetings of the Fellows during the Session, are indicated by the list appended:—

PAPERS READ DURING THE THIRTY-SIXTH SESSION.

1869.

Mar. 16.—*Mr. James Caird*.—On the Agricultural Statistics of the United Kingdom.

April 20.—*Dr. Guy, F.R.S.*—On Insanity and Crime: and on the Plea of Insanity in Criminal Cases.

May 18.—*Mr. Samuel Brown, P.I.A.*—On the Statistics of the Netherlands.

June 15.—*Mr. T. A. Welton*.—On the Statistics of the English Census.

Nov. 16.—An Inaugural Address by the President, William Newmarch, Esq., F.R.S., on the Progress and Recent Condition of Statistical Inquiry.

Dec. 21.—*Mr. Samuel Brown*.—Report on the Seventh International Statistical Congress.

„ *Mr. R. H. Inglis Palgrave*.—On House Accommodation in England and Wales, in Relation to the Census of 1871.

1870.

Jan. 18.—*Professor L. Levi*.—On the Statistics of Joint Stock Companies from 1814 to the Present Time, and of Companies with Limited and Unlimited Liability formed since the Year 1856.

Feb. 15.—*Mr. Ernest Seyd*.—On International Coinage and Foreign Exchanges.

PAPERS READ DURING THE SESSION—*Contd.*

1870.

Mar. 15.—*Rev. Dr. Buchanan.*—On the Finance of the Free Church of Scotland.

April 19.—*Mr. E. H. Patterson.*—On our Home Monetary Drains, and the Crisis of 1866.

May 17.—*Professor J. E. Thorold Rogers, M.A.*—On the Incidence of Local Taxation.

June 21.—*Mr. William E. A. Axon, F.R.S.L.*—Statistical Notes on certain Free Libraries of Great Britain.

The very full attendance of Fellows and Visitors at the Monthly Meetings of the Society which these papers have secured, and the animated and instructive discussions which these various topics have for the most part elicited, is the best testimony the Council can produce of the esteem in which the pursuits of the Society continue to be held.

It will be remembered that in the last report the Council alluded to the remote possibility of Government making provision for the Statistical Society with those other learned societies of the Metropolis, for whom buildings were about to be erected at the public cost.

The Council assured the Society that the subject of better House Accommodation for its Fellows should not be neglected, and they have now to report the steps which have been taken to redeem that promise.

In April last the Honorary Secretaries were requested by the Council to issue a circular inviting Delegates from the several Societies who, according to information which the Council had been able to gather, were disposed to join in a project for securing by co-operation the erection of a suitable Building in which all these bodies could be adequately domiciled. The circular was as follows :—

STATISTICAL SOCIETY,

12, ST. JAMES'S SQUARE, S.W.,

London, 6th April, 1870.

*To the**of the*

For some years complaints have been made by many of the Learned and Scientific Societies of London of the insufficiency

and inconvenience of the House Accommodation they obtain as compared with the cost they are compelled to pay for it; and suggestions have from time to time been made, that the evils in question might be obviated by the combination of a sufficient number of such Societies, and their concentration in one general building; and that out of such an arrangement forms of co-operation might arise by which the objects of the several Societies might be advanced in a material degree.

The Council of the Statistical Society of London, who have long been impressed with the importance of the subject, are of opinion that the time has arrived for bringing these suggestions to some practical test, and they have, therefore, determined to invite those Societies who feel an interest in the matter, to send Delegates to a Meeting for the purpose of considering it, to be held here on Thursday, the 28th instant, at half-past 4 o'clock precisely.

The Council will be glad to have the co-operation of the

and we shall feel much obliged by your informing us, as soon as convenient, whether it will appoint Delegates to the Meeting, and likewise by your furnishing us with answers to the following inquiries respecting the Society :—

1st. Is it Chartered or not ?

2nd. What is the number of its members ?

3rd. What is its annual expense for House Accommodation, including Rates, Taxes, &c. ?

It is to be distinctly understood that the only objects of the Meeting are to provide information and promote discussion upon the subject, and that no Society taking part in the proceedings is to be considered pledged to the recommendations, if any, which the Meeting may adopt.

We have the honour to be,

Your most obedient Servants,

(Signed)	W. G. LUMLEY,	} <i>Hon. Secs.</i>
	W. B. HODGE,	
	FREDERICK PURDY,	

A meeting was accordingly held in these rooms on the 28th April, William Newmarch, Esq., F.R.S., President of the Society, in the Chair.

In pursuance of the resolutions passed on that occasion, the following letter was addressed to a number of learned bodies.

STATISTICAL SOCIETY,

12, ST. JAMES'S SQUARE, S.W.,

28th April, 1870.

Combined and Improved House Accommodation for Learned Societies.

My Lords and Gentlemen,

In response to the Circular, a copy of which is printed on the other side, a Meeting of Delegates has been held here this day, William Newmarch, Esq., F.R.S., President of this Society, in the Chair. The following seventeen Societies were represented:—

Anthropological Society.
Archæological Association.
" Institute.
East India Association.
Entomological Society.
Ethnological "
Institute of Actuaries.
Iron and Steel Institutes.
Juridical Society.

Mathematical Society.
Meteorological "
Photographical "
Royal Colonial Institute.
Social Science Association.
Statistical Society.
Victoria Institute.
Zoological Society.

After discussion, two resolutions were placed before the Meeting, and both were carried unanimously, viz. :—

1. " That in the opinion of the present Meeting it is desirable
" to establish co-operation in order to obtain a building
" for the accommodation of Learned Societies."
2. " That the Learned Societies be invited to inform the Statis-
" tical Society, on or before the 31st May prox^o., whether
" they concur in the proposal to secure Combined House
" Accommodation, and to nominate from their respective
" Councils one Member to serve on a Joint Committee to
" forward the object."

In order to carry out the wishes of the Meeting as expressed in the second resolution, the Statistical Society have now to inquire :—

Firstly—Whether your Society concur in the proposal to secure Combined House Accommodation for the Learned Societies ?

Secondly—Whether your Council will nominate from their body one Member to serve on a Joint Committee to forward the contemplated object ?

If your answer should be in the affirmative, will you be pleased

to acquaint us as soon as possible with the name and address of the Gentleman whom your Council may depute to act, in order that a meeting of the Committee may be held at an early date.

We have the honour to be,

My Lords and Gentlemen,

Your very obedient Servants,

W. G. LUMLEY,
W. B. HODGE,
FREDERICK PUNDT, } *Hon. Secs.*

To the Council of the

Society.

Fourteen Societies, inclusive of our own, have signified their readiness to aid the movement by nominating Members for the Joint Committee. These bodies have an aggregate constituency of 6,000 to 7,000 Fellows; and some other Societies, it is expected, will eventually enter into the combination when the proceedings are further advanced.

Dr. Guy having consented to represent the Statistical Society at the Joint Committee, the Council have with much satisfaction nominated him accordingly.

They have reason to believe that it is the intention of the Committee to enter at once upon the consideration of the important matter referred to them.

Towards the close of 1869 a Committee of the Board of Trade referred to the Council the very practical inquiry, "Whether any improvement can be effected in the Trade Statistics now published monthly and annually by the Board of Trade, as regards accuracy in the information and economy in rendering it."

Upon the receipt of this communication the Council unanimously resolved:—

"That the following gentlemen, viz.:—The President, Mr. Hamilton, Mr. Glover, Mr. Hyde Clarke, and Mr. Jourdan be appointed a Committee, with power to call a meeting of Merchants and others, in the City or elsewhere, for the discussion of the subject."

In pursuance of this resolution the President of the Society issued a circular, a copy of which is printed below, to a number of influential persons connected with the Commerce of the City of London.

STATISTICAL SOCIETY,
12, ST. JAMES'S SQUARE,
December, 1869.

SIR,

The Council of the Statistical Society have had referred to them the recent circular issued by a Committee of the Board of Trade, with a view to improvements and simplifications of the return of Imports and Exports prepared at the Custom House.

It appears to the Council that the Statistical Society may usefully assist the Government and the Merchants by affording opportunities for conferences and discussions, and I am, therefore, desirous to invite the favour of your attendance at a meeting to be held on Thursday, the 6th January, prox^o., at 1 o'clock precisely, at the Cannon Street Hotel (Room K).

I have the honour to be,

Your obedient Servant,

(Signed) WM. NEWMARCH, F.R.S.,
President.

A meeting was held accordingly, when the whole subject was discussed at some length, and suggestions were made, which will probably assist the objects both of the Merchants and the Government.

A minute of recommendations in connection with the taking of the Census of the United Kingdom in 1871 has been forwarded by the Council to the Secretary of State for the Home Department. These recommendations are published in the *March Journal* of the present year.

Last year the Council inaugurated the custom observed by other Scientific Societies, of having, at the end of the Session, an Annual Dinner of the Fellows and their Friends. The success which attended the first attempt has determined the Council to recommend a similar celebration this year, and they find that it meets with the cordial acceptance of the Fellows.

The thirty-ninth meeting of the British Association for the Advancement of Science was held at Exeter in August last. The Right Honourable Sir Stafford Northcote, Bart, presided over the Section of "Economic Science and Statistics." The President's opening address, and some of the papers read in the Section on that occasion, have been printed in the *Society's Journal*.

Since the last annual meeting of the Fellows the Council have had to record the demise of several among the oldest supporters of the Society. The obituary of the past year contains, with other names, those of Sir John P. Boileau, Bart., William Ewart, M.P., John Tidd Pratt, and Frederick North.

Sir John Boileau, during the earlier years of the Society, took a very active part in its affairs. Upon more than one occasion he was elected President, and was, for many years, one of the Vice-Presidents, and held the latter office at the time of his death.

Your Council expressed their sense of the loss which the Society had sustained in the demise of Sir John Boileau by passing unanimously the following resolution, viz. :—

“ That the Council of the Statistical Society desire to place on
“ record their sorrow at the loss of their late colleague and
“ Vice-President, Sir John P. Boileau, Bart., a man eminent
“ for the courtesy of his manners and kindness of his
“ disposition, and also for his sound and intelligent views
“ on every subject connected with the advancement of
“ knowledge.”

This tribute to the memory of Sir John Boileau was communicated to his family, and was gratefully acknowledged by his son, the present baronet.

Mr. John Tidd Pratt and Mr. Frederick North were elected Fellows of the Society in the year of its establishment.

The Council, considering it will conduce to the convenience of the Fellows and afford more time for the reading and discussion of papers, if the hour for holding the ordinary meetings be somewhat earlier, they have resolved that henceforth the chair be taken at 7.45 P.M. on those occasions.

With a yearly increase in their numbers the financial condition of the Society is found to be no less satisfactory than at recent audits, while the Fellows cannot but observe that there is no diminution in the activity of the Society's proceedings.

The balance of assets on the 31st December last was 1,961*l.* 13*s.* 3*d.* in favour of the Society. Of that sum 1,136*l.* 2*s.* 1*d.* was the purchase value of 1,200*l.* of Government Stock, and 200*l.* 4*s.* 9*d.* was the cash balance at Messrs. Drummonds' Bank.

COUNCIL AND OFFICERS FOR 1870-71.

President.

WILLIAM NEWMARCH, F.R.S.

Council.

Major-General Balfour, C.B.	James Heywood, M.A., F.R.S.
Thomas Graham Balfour, M.D., F.R.S.	William Barwick Hodge.
R. Dudley Baxter, M.A.	Francis Jourdan.
Samuel Brown.	Professor Leone Levi.
Hyde Clarke, D.C.L.	<i>Sir Massey Lopes, Bart., M.P.</i>
Leonard Henry Courtney.	William Golden Lumley, Q.C., LL.M.
Sir Charles Wentworth Dilke, M.P.	<i>James MacClelland.</i>
William Farr, M.D., D.C.L., F.R.S.	Frederick Purdy.
<i>William Fowler, M.P.</i>	<i>Bernhard Samuelson, M.P.</i>
Francis Galton, F.R.S.	Colonel W. H. Sykes, M.P., F.R.S.
The Right Hon. W. E. Gladstone, M.P.	<i>Ernest Seyd.</i>
John Glover.	<i>William Tayler.</i>
William Augustus Guy, M.B., F.R.S.	William Pollard-Urquhart, M.P.
James Thomas Hammick.	Professor Jacob Waley, M.A.
Frederick Hendriks.	John Walter, M.P.

*The names of the New Members of the Council are printed in Italics.**Treasurer.*

James Thomas Hammick.

Honorary Secretaries.

William Golden Lumley, Q.C., LL.M. Frederick Purdy.
 Jacob Waley, M.A.

A vote of thanks to the President, Council, and Officers, for their services during the past year, was carried unanimously.

The proceedings terminated with a vote of thanks to the Chair.

(I.)—RECEIPTS and PAYMENTS of the STATISTICAL SOCIETY for the YEAR 1869.

RECEIPTS.			PAYMENTS.		
	£	s. d.		£	s. d.
Balance in Bank, } 31st December, } 1868	£218	11 6	Investment (£100 New 3 per Cents.)	98	10 -
Balance of Petty } Cash	1	- 7	Rent of Rooms	100	- -
Balance of Adver- } tisement Cash ... }	1 16	6	Salaries	200	- -
	216	8 7	Journal, Printing	£273	11 3
			„ Index	5	5 -
1869.				278	16 3
Dividends on Consols	35	3 6	Advertising	24	12 8
Subscriptions, viz.:—			Ordinary Meeting Expenses	30	11 10
14 Arrears	£29	8 -	Library	7	9 10
279 for 1869	585	18 -	Stationery and Miscellaneous } Printing	16	9 6
1 „ '70	2	2 -	Postage and Receipt Stamps	25	10 -
	617	8 -	Fire and Light	10	12 7
Compositions	42	- -	Furniture and Repairs	7	2 9
Journal Sales	£102	8 -	Incidental Expenses	30	9 11
„ Advertise- } ments	12	12 -	Balance in Bank, } 31st December, } 1869	£197	18 2
	115	- -	Balance of Petty } Cash	-	2 9
	£1,026	- 1	Balance of Adver- } tisement Cash ... }	2	3 10
				200	4 9
				£1,026	- 1

(II.)—BALANCE SHEET of ASSETS and LIABILITIES on 31st DECEMBER, 1869.

LIABILITIES.			ASSETS.		
	£	s. d.		£	s. d.
Printing December } Journal	74	9 -	Cash Balance	200	4 9
Making Index to } Journal	5	5 -	New 3 per Cents. } (£871 4s. 3d.) ... }	£886	2 1
	79	14 -	8 per Cent. Consols } (£328 15s. 4d.) }	300	- -
Miscellaneous Print- } ing and Stationery }	18	10 -		1,186	2 1
Carpenter	8	9 4	Property (Estimated Value):—		
Plumber	8	- 3	Books in Library	£400	
Miscellaneous (say).....	10	- -	Journals in Stock	200	
	34	19 7	Furniture	100	
Balance in favour of Society ...	1,961	18 3		700	- -
	£2,076	6 10	Arrears recoverable (say)	40	- -
				£2,076	6 10

"Auditors' Report for 1869.

" STATISTICAL SOCIETY,

" 12, ST. JAMES'S SQUARE, S.W.,

" London, 3rd February, 1870.

" The Auditors appointed to examine the Accounts of the Society herewith

" REPORT :—

" That they have carefully compared the Entries in the Books with the several *Vouchers* for the same, from the 1st January to the 31st December, 1869, and find them correct, showing the *Receipts* (including a Balance of 216*l.* 8*s.* 7*d.* from 1868) to have been 1,026*l.* —*s.* 1*d.*, and the *Payments* 825*l.* 15*s.* 4*d.*, leaving a Balance in favour of the Society of 200*l.* 4*s.* 9*d.*

" They have also had laid before them an estimate of the *Assets* and *Liabilities* of the Society, the *former* amounting to 2,076*l.* 6*s.* 10*d.*, and the *latter* to 114*l.* 13*s.* 7*d.*,—showing a Balance in favour of the Society of 1,961*l.* 13*s.* 3*d.*

" They further find that at the end of the year 1868 the number of Fellows was 387, of whom 24 Died or Withdrew; and 37 new Fellows were elected during the year, leaving on the list, on the 31st December, 1869, 400 Fellows.

(Signed)	" FRAS. JOURDAN,	} <i>Auditors."</i>
	" WILL. PARE,	
	" HENRY G. BOHN,	

On our HOME MONETARY DRAINS, and the CRISIS of 1866.

By R. H. PATTERSON, ESQ.

[Read before the Statistical Society, April, 1870.]

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I.—Introductory.

EVERY one knows the important effect upon the rate of discount which is produced by variations in the stock of gold in bank: and in this country the influence of those variations is, rightly or wrongly, much greater than in any other. In this paper, I propose to examine the causes of some of the variations in the Bank of England's stock of gold, and also the extent of those variations,—leaving for subsequent consideration the effect which they produce upon the Rate of Discount. I do not propose to deal with Foreign drains of gold (the consideration of which would open up a field of inquiry wider than I can deal with at present), but only with Home drains—with the movements of gold within the limits of our own country—the ebb and flow of the precious metal between the banks and the public; and especially with that ebb and flow as regards the Bank of England, the centre of our banking system, and the great fountain of our currency.

For several years past, the monthly returns of the Board of Trade have been of great use in enabling us to discriminate between foreign and home drains. By the aid of those returns, and still more by the daily unofficial statements of the gold taken into and out of the Bank of England, we can tell, when any drain of gold upon the banks takes place, how much of it has been due to a foreign drain (*i.e.*, to an *export* of gold), and how much to a home drain—that is to say, to an increased requirement for coin on the part of our own people—or, if we take the case of the Bank of

England alone, by the conjoint requirements of the public and of the other banks of the country.

It is a matter of great importance, at all times, to distinguish correctly between home and foreign drains of gold; but I must say that even yet the discrimination between such drains is very imperfectly made by our journalists and other writers on the subject. I have been surprised to observe how little attention is given by financial writers as to whether the drain has been purely domestic or not, and what gross inaccuracies are occasionally published on the subject. I could mention several important instances of recent date in which a drain of gold from the Bank of England is currently believed to have been mainly of foreign origin—when in reality the imports of gold have exceeded the exports to the full ordinary amount—namely, at the rate of about 4,000,000*l.* or 5,000,000*l.* a-year (the greater part of which amount appears to be consumed in articles of art and luxury).

II.—*The Periodical Drains.*

As regards the home drains from the banks, and especially from the Bank of England, I desire, in the first place, to call attention to some of those drains which are of a strictly Periodical character—a regular ebb and flow alike of notes and coin—Monetary Tides, in fact, as steadily recurrent as the tides of the ocean.

There are several periodical financial requirements which do not produce any appreciable drains of money from the banks. Of this kind are the various Monthly Settlements: namely, 1, in connection with our home trade bills—the settlement of accounts between the wholesale houses and the retail dealers who have purchased their goods; 2, the Colonial settlements; and, 3, the settlements in connection with the buying and selling operations on the Stock Exchange. These monthly settlements produce a great interchange of cheques among the banks, as may be seen by the weekly returns of the Clearing House. But as almost the whole of those monthly and fortnightly payments are made by cheques, hardly any money is needed; no notes or coin are thereby withdrawn from the banks: the amount is merely transferred from one man's banking account to another's, or at most from one bank to another: so that the effect produced upon the stock of money in the banks by those payments is in most cases not perceptible. Accordingly they do not require to be further noticed in this paper.

The *periodical* drains, or monetary tides, of which I desire to speak, are, the quarterly tides in England, the half-yearly tides in Scotland, the autumnal drain, and the Christmas one.

Firstly. The quarterly drains upon the Bank of England. These are produced by the Government payments of salaries and of

the interest on the National Debt, &c.,* and also by the payments of rent and other quarterly obligations on the part of the public. These quarterly payments occasion a large temporary withdrawal of money from the bank. A considerable portion of the Government payments of salaries, and also of the quarterly dividends on the Debt, is made to persons of small means, who do not keep a banker's account, and who, therefore, cash the cheques which they receive, spending a portion of the amount and keeping the remainder beside them. Moreover (whether they keep banking-accounts or not), the recipients of these quarterly payments, and also the community at large, have considerable payments to make for rent and other debts incurred during the quarter: so that a large sum in notes and coin is at such times paid to landlords, tradesmen, and others, and is thus temporarily absorbed in the circulation. But in about three weeks' time, all the money required for these quarterly payments finds its way back into bank, being re-deposited, sometimes after passing through many hands.

The effect of these Quarterly drains upon the Bank of England is shown in a table, subjoined to this paper, in which are given the statistics for each quarter during the last eight years. On the average it appears that the drain upon the bank for notes has amounted to 1,830,000*l.* for each of the April and July quarters, 2,270,000*l.* for the January quarter, and 1,370,000*l.* for the October quarter. But, as will be seen from the Table (Appendix, E), the

* In 1868 the interest on the National Debt, payable half-yearly, was as follows:—

<i>In January and July—</i>		£
Consols.....	Interest	5,846,689
New Five per Cents	"	10,574
" Three and a half per Cents	"	4,231
" Two and a half "	"	44,048
Annuities for various terms of years	"	27,014
		<hr/> 5,932,556

<i>In April and October—</i>		£
New Three per Cents.....	Interest	2,864,339
Reduced "	"	1,592,579
Exchequer Bonds (1853)	"	5,458
Annuities, Great Britain	"	467,900
Exchequer (?)	"	6,307
Annuities (1885)	"	238,013
Savings banks? (1885)	"	322,886
Red Sea	"	18,000
		<hr/> 5,515,482

Exclusive of floating debt and interest on deficiency bills, which, in 1868, amounted altogether to 213,075*l.* per annum.

variations for each quarter are so great that little is to be learnt merely from the averages. To have made the table complete, I should also have given the amount of coin simultaneously withdrawn from the bank for home circulation: but no returns of this kind are published, and the computations by which the amount of coin so withdrawn can be ascertained are somewhat laborious; so that I have given this item of the statistics only for a single year (1866).*

Secondly. The Half-yearly monetary tides in Scotland. These occur in May and November, and are produced by the system of half-yearly payments of rent for houses and farms, and of servants' wages, and also because a considerable portion of the interest on mortgages, &c., is made payable at those half-yearly terms. More notes at such times are needed by the Scotch banks; and as these banks cannot (under the Act of 1845) issue more notes without increasing their stock of gold to an equal amount, a considerable sum in gold is always withdrawn by them from the Bank of England in May and November; but it is returned as soon as the monetary tide is over—usually in three weeks or a month. The gold itself is never needed, and the packages containing it are frequently returned to the Bank of England without ever being opened. This half-yearly drain for Scotland amounts (so far as I can ascertain) to about 400,000*l.*; and it tends to increase, owing to the note circulation of the Scotch banks being fixed, while the monetary requirements of the country gradually increase.

Speaking of Scotland, I cannot help remarking the wonderful economy of the circulation which there prevails. I do not allude to the *1*l.** notes, which the Scotch so resolutely and wisely refused to part with, and the non-existence of which in England occasions such a waste of gold,—nor yet of the wonderful ramifications of the Scotch banking system, by means of which a dozen large banks amply suffice for the whole wants of Scotland, spreading their branches into every little town or hamlet. What has most surprised me of late years in my autumnal visits to Scotland, is to find to what an extent the cheque-book is made use of compared with our English practice. Many farmers regularly give cheques for payment of sums not larger than one pound sterling, and sometimes even for less. They do so for the important object of passing all their expenditure through their cheque-book. In fact, with them the cheque-book is at once a receipt-book and a record of all their receipts and expenditure; and, what is hardly less worthy of notice is, that the Scotch banks make no objection to this: they are quite willing to incur all trouble connected with the accounts of their depositors. I may add that, although there is almost no demand for sovereigns in Scotland, as the *1*l.** notes serve the same purpose, half-sovereigns

* See Appendix, F.

are coming into use as more convenient than the bulkier silver coins.

Thirdly. There is the Autumnal drain—which is occasioned by the operations of the agricultural classes, and also by the requirements of tourists and holiday-seekers. The operations of harvest, and the large sales made at the great autumnal fairs, are carried on chiefly by means of money, and not by cheques. Tourists, also, who go abroad, and the whole body of holiday-seekers who proceed to the moors or the seaside, provide themselves with an extra supply of money. For these various purposes gold coin is in unusual requirement:—for harvest purposes, because there are no small notes in England, and 5*l.* notes are too large for weekly wage-payments; for tourists, because, whether they go abroad or make journeys at home, sovereigns are more needed by them than usual. Ready money is indispensable to tourists, for they cannot run up bills as they do at home, and the cheque-book is of little efficacy when dealing with strangers.

Fourthly and lastly, there is the Christmas-tide, in the last week of the year, owing to the usual payment of Christmas bills, &c.; but this tide is not clearly seen by itself, as it is mixed with the quarterly tide in the first week of January.

From the above statement it will be observed that the periodical monetary tides, or drains on the bank, come most closely together in the latter portion of the year: for the Autumnal drain is followed by, and to some extent co-exists with, the Quarterly drain in the first week of October, which in turn is followed by the drain of gold for Scotland in the middle of November; and thereafter come the Christmas bills and the quarterly drain in the first week of January. These facts serve to explain the tightness of the money market which frequently prevails in October and November.

To what extent a new periodical rise and fall of the Bank's stock of money will be produced by the new mode of collecting the direct taxes, is a matter on which it is as yet premature to speak.

In a rightly constituted banking system such periodical drains *ought not of themselves to affect the rate of discount*: for both their amount and their duration are well known. They are mere temporary withdrawals of money from the banks—the notes and coin so withdrawn being quickly returned, the larger portion in a few days, and the whole amount usually within three weeks. The money goes out of bank simply to make certain regular payments, and returns into bank as soon as those periodical payments have been made.

III.—*The Non-Periodical Home-Drains.*

I have now done with Periodical drains. But Home drains include others of a different kind, which may be classed under two

heads. One of them arises from an increase of industrial enterprise and employment, which is a blessing; the other from a panic, or failure of credit, which, however produced, is a serious calamity.

When trade and enterprise are unusually active, a home drain upon the Bank of England necessarily occurs. As cheques cannot be used in payment of wages, more notes or coin, or both, are required; and, speaking roundly, this extra supply of currency can only be obtained from the Bank of England. At such times both the Scotch and the Irish banks withdraw more gold from the Bank: not that the gold is needed in those countries, but it is required by the banks to enable them to increase their issue of 1*l.* notes. In England, where the note-issues of the provincial banks are absolutely fixed, more Bank of England notes are required, to supplement the provincial note-circulation; also, as in England there are no notes of less value than 5*l.*, more *sovereigns* are needed for wage-payments, and accordingly have to be withdrawn from the Bank of England by the provincial banks. In this way an increase of trade and enterprise always tends to produce a drain upon the Bank of England.

When a Panic occurs, a much more serious home-drain is produced upon the Bank. At such a time cheques fall somewhat into disrepute, so that merchants in some cases require payment in cash. The public also, to some extent, take to hoarding,—that is to say, depositors withdraw their money from banks whose credit is shaken; and, although the greater part of the amount is doubtless redeposited in other banks, a portion of it is kept in hand—in other words, it is *hoarded*. But a very large part of the drain upon the Bank of England in the form of hoarding, which occurs during a panic, is made by the other banks: for these banks, being liable to unusual demands on the part of their customers, have to keep in hand a larger stock of money than usual. The Scotch and Irish banks, for the reasons above mentioned, withdraw gold from the Bank of England for this purpose; the English banks withdraw notes (mostly large ones), and a portion of coin sufficient to make the fractional parts of the payments then demanded of them.

I meant to have given an illustration of the former of these two kinds of home drains,—namely, a drain not produced by panic, but chiefly by an increase of trade and enterprise occurring simultaneously with two of the periodical drains, in connection with what I may call the semi-crises in the autumns of 1844 and 1845; but I regret that, owing to the very considerable difficulties to be encountered, I cannot do so in this paper. Should the Society take any interest in so small a matter, I will be happy to hand in an illustrative statement of this kind at a subsequent meeting during the present session.

IV.—*The Crisis of 1866.*

As an illustration of a home drain produced by a Panic, I shall take the most recent, and, in some respects, the most remarkable, event of this kind, namely, the crisis of 1866. We shall here find, what is well known, that a panic produces an increased requirement for currency far exceeding that occasioned by an extension of trade or any other cause.

I. *The Bank of England.*—The table (see Table A, Appendix) which I have compiled may perhaps seem too elaborate; but I have found, by experience in such investigations, that it is only by going to the bottom of the matter, and obtaining full and accurate statistics, that we can ever get rid of the startling diversities of opinion which prevail on such subjects, and which, even in the highest quarters, did actually prevail on some important points connected with the Crisis of 1866.

In this table the only novel feature is that shown in the columns (5, 6, 7, 8, 9, 10, 11) relating to the movements of gold, and especially the variations in the amount of gold in home circulation. I must explain the mode in which I have calculated those weekly variations. The Bank gives no information on this subject; but each day, in the City article of the London daily papers, it is usual to publish an unofficial statement of the Bank authorities of the amount of gold taken into the bank from abroad, and out of the bank for export—the amount being given only in round numbers. By means of these daily returns, I obtain the balance for the week, showing so much gold thus added to the bank's stock, or withdrawn from it. I then proceed as follows:—Suppose that the gold in bank amounts to 20,000,000*l.* at the end of any week, and that in the course of the following week the balance of the daily returns shows that 100,000*l.* in gold has been added to the bank's stock from abroad. Adding this amount to the 20,000,000*l.*, the bank's gold should amount to 20,100,000*l.*, if the home circulation of gold coin has remained unaltered in amount. But if the bank's stock of gold amounts only to 20,000,000*l.*, as before, this shows that 100,000*l.* in gold has been taken from the bank for home use. On the other hand, if the bank's gold amounts at the end of the second week to 20,200,000*l.*, this shows that the home circulation has decreased to the extent of 100,000*l.*, and that this amount has been paid into the bank by the public or the other banks.

Having made this explanation, I might leave the table to tell its own tale. I shall only direct your attention to one or two of the facts which it makes manifest. In the first place, columns 1 to 4 show clearly, that the Crisis was in no way occasioned by a foreign drain of gold: for the imports of gold in almost every week exceeded

the exports—an excess during the six months amounting to no less than 6,938,736*l.* Of this large amount, more than one-half (3,958,000) was added to the Bank of England's stock of gold; the remainder (2,980,736*l.*) being otherwise disposed of in home use.

It is next to be noticed that, owing to the unusual demand for Gold-coin, at the height of the panic, not only was all the foreign gold taken into bank immediately withdrawn from the bank for domestic circulation, but a considerable reduction took place from the same cause in what (as regards this table) may be called the bank's original stock of gold. The total withdrawal of gold from the bank for domestic circulation in the month of May amounted to 2,808,000*l.* But it is to be noted that part of this drain was owing to the periodical Scotch drain, which usually amounts to about 400,000*l.* It will also be seen that of the amount of gold coin withdrawn for home use in May, nearly the whole of it (2,653,000*l.*) was returned to the bank in the next five weeks. And as regards the whole period embraced by the table, of the 3,958,000*l.* of gold added to the bank's stock from abroad, 1,866,000*l.* was in bank at the end of that period, and 2,092,000*l.* still remained in circulation.

As regards the Notes of the bank. In the second week of May, when the panic was at its height, the note circulation of the bank increased to the extent of 3,776,000*l.*; and at the end of the six months embraced by the table, 3,127,410*l.* more were in circulation than on the 7th of March.

The total increase of the Circulation (bank notes and gold coin) at the height of the panic was 6,666,000*l.*; and at the end of the six months the circulation of Bank of England notes and coin was 5,732,000*l.* greater than at the beginning of the period.

The peculiarity of the Crisis of 1866 was, that the monetary difficulty was not occasioned by the note circulation of any bank of issue falling into discredit, but owing to a great run for deposits upon nearly all the metropolitan banks. The public, including the financial companies, suddenly withdrew from the London banks an unusually large amount of their deposits, and kept the amount (in notes) in their own hands, or for their own use. The consequence was that, at the height of the panic, nearly four millions in Bank of England notes were hoarded—partly by the public, but partly also by the banks themselves, which were apprehensive of a continuance of the run upon them, and which accordingly laid in an extra supply of notes to meet this possible emergency. This was the true cause of the great withdrawal of notes from the Bank of England. These notes were not required to give in exchange for other bank notes, but to pay out to panic-stricken depositors, and also to supply the place of the partially discredited commercial currency (*i.e.*, bills).

Hence, as the return obtained by Alderman Salomons* shows, by far the greater part of the increased issues of the Bank of England at the time were in the form of large notes, suitable for the payment of deposits. The extra 3,776,000*l.* withdrawn from the Bank of England during the panic week was composed as follows:—

Denomination of Note.	9th May.	16th May.	Increase.	
	£	£	£	Per cent.
5 <i>l.</i>	8,063,000	8,711,000	648,000 =	to 8
10 <i>l.</i>	4,299,000	4,876,000	577,000 =	„ 13
20 <i>l.</i> to 100 <i>l.</i>	6,482,000	8,185,000	1,703,000 =	„ 26
200 <i>l.</i> „ 500 <i>l.</i>	1,798,000	2,337,000	539,000 =	„ 30
1,000 <i>l.</i>	1,703,000	2,012,000	309,000 =	„ 18

Here it appears that upwards of 80 per cent. of the increase was in notes of 10*l.* and upwards, and rather more than 67 per cent. in notes of 20*l.* and upwards. As the “Economist” justly observed at the time:—“This enables us at once to determine the purpose for which the great demand on the Bank of England was made. The demand for notes above 20*l.* could not be to supply the place of the country circulation, which consists wholly of 5*l.* and 10*l.* notes. A 200*l.* note or a 1,000*l.* note, would, in a circulation run, be wholly useless. All large notes—all above 20*l.*—may be assumed to be taken for deposits only. Many of the 5*l.* or 10*l.* notes *may* have been taken out for deposits also, but the higher denominations *must* have been so.”

II. *The Provincial Banks.*—Let me now say a word as to the condition of the English provincial banks of issue during this memorable crisis. I have already said that it is a peculiar feature of the crisis of 1866—and in this respect it stands alone—that the credit of the note circulation of the country remained in perfect integrity. Of the two hundred and more banks of issue in the kingdom, there was not one whose notes fell into discredit. Of the Scotch and Irish banks I need not speak. But at the time a serious charge was made in Parliament against the English provincial banks of issue. It was said that the notes of those banks fell into discredit: that their note issues, instead of increasing as they should have done, like those of the Bank of England during the crisis, diminished to the extent of “fully 1,000,000*l.*,”—that this was owing to those notes having become discredited—and that, in consequence of this, 1,000,000*l.* of the notes withdrawn from the Bank of England during the crisis must have gone to fill up this gap in the provincial circulation. The parliamentary return obtained by Alderman Salomons (above quoted) was not published at the time this charge was made; and I think the return sufficiently

* See Appendix, B.

rebutts the charge, by showing that the extra supply of notes taken from the Bank of England was meant to meet the demands of depositors only, and not to take the place of the small note circulation of the country banks. But I can rebut the charge by a more direct proof. I can show that when the panic was at its height, the circulation of the provincial banks, so far from diminishing, stood at the highest amount which it was practicable for those banks to issue; proving conclusively that the credit of their notes was wholly unimpaired even at the height of that terrible season of trial. I shall also show that the decline which ensued in the subsequent period was only what was to be expected when the crisis had passed, leaving trade and enterprise in a state of unusual depression. A similar decline (as will be shown) took place in the note circulation of the Bank of England—though to a lesser extent, owing to the longer duration of the panic in London than in the provinces.

In confirmation of this view of the case, I adduce the following statistics. I shall first show the highest amount of the note circulation of the provincial banks relative to their legal power of issue in times previous to the crisis—namely, in November, 1865. I then give similar statistics for the middle of May, 1866, when the panic was at its height. Next, the decline in the note circulation of these banks, and also of the Bank of England, in the two months immediately following the height of the crisis. And, lastly, the Board of Trade returns of the imports and exports of this country during the same period:—

1. *Amount of Note Circulation of the English Provincial Banks of Issue Relative to their Fixed Power of Issue.*

<i>November, 1865—</i>		£
Legal power of issue	7,365,000	
Notes in circulation	6,000,000	
Notes in reserve		1,365,000
Number of banks 194.		
Average reserve of notes for each bank....	7,036	

2. *Similar Statistics during the Crisis of 1866.*

<i>May, 1866—</i>		£
Legal power of issue	6,814,000*	
Notes in circulation	5,568,000	
Notes in reserve		1,246,000
Number of banks 190.		
Average reserve of notes for each bank....	6,557	

* This decrease in the legal power of issue was caused mainly by the resignation of its power to issue notes by the National Provincial Bank, which it was compelled (by the Bank Acts) to make when it opened an office in London. And it was partly owing to this cause that the other provincial banks had to increase their issues during the month of May, 1866.

3. *Decrease of Note Circulation in England after 16th May, 1866.*

	£		£
Bank of England, May 16	26,121,000	Country banks, May 12	5,568,744
„ July 25	25,363,000	„ July 21	4,700,219
Decrease of circulation	758,000	Decrease of circulation	868,525

4. *Decrease of Foreign Trade.*

	May.	June.	July.
	£	£	£
Imports	23,224,762	23,243,701	19,597,929
Exports	15,870,131	14,630,120	14,957,834
	39,094,893	37,873,821	34,555,763

From these statistics it will be seen (1) that the note circulation of the provincial banks of issue was higher at the height of the panic than (so far as I have been able to find) it ever was at any previous period, showing that the credit of their notes was perfectly unimpaired; (2) that the subsequent decrease in their note circulation was accompanied by a similar decrease in that of the Bank of England; and although the decrease of the Bank of England's note circulation was less than that of the provincial banks, this was owing to the fact that the panic was more felt, and much longer prevalent, in London than in the provinces. Lastly, we see the decrease which took place in the foreign trade of this country,—in addition to which there was a total collapse of joint-stock enterprise. These facts, as it seems to me, fully account for the decrease in the note circulation of the provincial banks in June and July, from the exceptionally high amount at which they stood in the middle of May. I may add that the half-yearly payment of rents, &c., which prevails in Scotland, extends also to some parts of the North of England; thereby tending to produce an increase in the issues of the English provincial banks in the middle of May.

III. *The Banks of England and France.*—The last group of statistics which I desire to lay before you in connection with the Crisis of 1866, relates to the relative position of the Banks of England and France during the crisis, and the imports and exports of coin and bullion into England and France during that period. These statistics are given in Appendix, C.

The Note-circulation of England, or rather the Bank's power of issuing notes, is dependent upon the amount of gold in the bank. Hence, when an increased demand for currency takes place, what is needed is an increase in the bank's stock of gold. Hitherto it has been believed and maintained that this object can be, and is attained by the Bank raising its rate of discount. Indeed the chief motive

for raising the bank-rate has been expressed in the following pithy sentence,—“to restrain the export of gold and to encourage its “import.” It has been unhesitatingly maintained that even a small difference in the bank-rate of two countries will cause gold to leave the country where the lower rate prevails, and flow into the country where the bank-rate is higher. In the autumn of 1865, only a few months before the great Crisis in this country, Baron Rothschild, when giving evidence before the French Government Inquiry upon Banking, laid it down as an incontrovertible fact, that if the Bank of France were to lend its money at 2 or 3 per cent. below the rate charged by the banks of another country, it would forthwith be wholly drained of its gold.

But what is the lesson taught us by this table? Even at the beginning (in March), the French bank-rate was $3\frac{1}{2}$ per cent. lower than that of the Bank of England, yet the gold in the Bank of France exceeded the Bank of England's stock by $4\frac{1}{2}$ millions, or thirty per cent. Here are two great banks, within twelve hours' distance of one another,—one of which holds $18\frac{1}{2}$ millions of specie and lends its currency to the public at 4 per cent., while the other has 14 millions of specie and charges 7 per cent. According to the theories which so long have been held sacred, such a condition of things ought to have been impossible, or at least it ought immediately to have drained all the gold from the Bank of France into this country. Yet no such result occurred. On the contrary, during the following nine weeks which intervened between this date and the commencement of the crisis in England, the specie in the Bank of France increased two millions, while the specie in the Bank of England remained stationary, or slightly declined.

Then came the Crisis, and the Bank of England raised its rate to 10 per cent., yet not an ounce of gold was thereby withdrawn from the neighbouring bank. Even an actual difference of 6 per cent. was powerless to attract gold from one side of the Channel to the other. In fact, when the Bank of England put on the screw, the difference in the amount of specie held by the two neighbouring banks became greater and greater in favour of the Bank of France. During the three months when the bank-rate in England was 10 per cent., the specie in the Bank of France rose from $20\frac{1}{2}$ millions to 29 millions, although the French bank-rate was only $3\frac{1}{2}$ and 4 per cent. If we look at the exports and imports of specie into the two countries, the same phenomenon presents itself,—namely, that the amount of foreign specie attracted to France was two-and-a-half times greater than the specie attracted to England, although the bank-rate in England was relatively 300 per cent. higher than the bank-rate in France!

These facts demonstrate in the most striking manner that other

influences are at work in times of crisis which wholly neutralise the effect of a rise in the bank-rate upon the international movement of specie. These influences are the panic which arises at home, and the consequent loss of credit which we sustain in the estimation of other countries. And this panic and loss of credit are most seriously aggravated by an excessive and long-continued rise of the bank-rate, such as occurred in 1866.*

In the face of facts so significant, and so opposed to some of the most strongly held opinions in this country on monetary science, perhaps I ought to apologise for not proceeding further, and for refraining to draw deductions from the statistics here given in relation to the present laws and practice of banking in England. But I desire only to lay the facts before you. I thought it would be more acceptable to the Society, and certainly more becoming on my part when addressing you for the first time, simply to make a humble contribution to the statistics, the stock of certain knowledge, which it is the principal object of this Society to accumulate, without presuming to lay before you any views of my own. I am aware, on this account, that the paper must be found by you bald and uninteresting,—and I thank you all the more for the kind patience with which you have listened to the reading of it.

Since this paper was put in type, the President, who is especially competent to express an opinion upon it, has told me that I ought to have proceeded further, by stating my opinions or deductions upon the facts given in this paper. I regret that I cannot adequately act upon this advice. I could not do so satisfactorily within the limits of time very properly assigned to the reading of a single paper. But in deference to the opinion expressed to me, I shall state the object I have in view, and the first part of which is carried out in the paper just read.

I object, on many points, to the banking and monetary system established in this country. I object most strongly to the artificial restrictions imposed by the Bank Acts of 1844 and 1845. I object also to the previous Act which suppressed the issue of small notes in England.

The cause of this Act being passed is worthy of a passing remark. In consequence of the many bank-failures in England in 1826, the Government of the day desired to lessen the injury to the lower classes arising from such bank-failures, by prohibiting the issue of small notes such as alone came into the hands of the working classes in the payment of wages, &c. But this, it seems to me,

* How serious was the loss of credit in the eyes of other nations which befell us in 1866, is shown, *inter alia*, by the official circular (given in Appendix, D) which Lord Clarendon, the Minister for Foreign Affairs, thought it necessary to address to our representatives at foreign courts.

was a most mistaken mode of remedy. In the first place, the numerous bank-failures in 1826, as in previous times of difficulty, took place because the English provincial banks were, as a rule, too small and weak to withstand a time of panic. But whose fault was that? It was the fault of the Government—of our past legislation. It was owing to the *monopoly of joint-stock banking* conferred long ago on the Bank of England, by which it was impossible for any but individuals or private firms to engage in banking. In Scotland, where banking was left *free* from the first, a very different state of matters naturally sprang up. The banks were established on the joint-stock system; and a few large banks, extending their branches all over the country, sufficed and still suffice for all the wants of Scotland. Now, in 1826, the real want in England was not to prohibit small notes, but to get strong banks. Get strong banks, and then their note-issues, whether large or small, will always be sound. Hence, as seems to me, the right remedy was, not to have prohibited small notes, but to have restricted the right of issuing notes to joint-stock banks possessing an adequate amount of capital. Such an arrangement would not only have been eminently useful of itself; but it would have tended to group, or consolidate by voluntary amalgamation, the excessively large number of provincial banks of issue then existing (and of which nearly 200 still remain) into a smaller number of large banks, with branches in the adjoining districts.

I must add that, while objecting to the Act of 1844, I also object very strongly to the mode in which this Act is ever and anon suspended. I fully assent to the necessity for its suspension, but not to the manner in which three successive Governments have suspended it. If I may dare to say so, I question also the conduct of the Bank itself, especially in some of the great crises which have made such havoc in the common industry of our country.

Holding such views, I think it will be obvious that so large a theme could not be properly dealt with in a single paper. The public is sick of the long and keen war of *opinions* which has been waged on this subject. If the question is to be satisfactorily dealt with at all, it must be upon an ample basis of facts. I have given you an instalment of those facts; and uninteresting as such statistics doubtless are, if the Society desires it, I will on a future occasion lay before you the statistics relating to the other leading points of the question. Then I will also venture to unite with those statistics the opinions or deductions which they seem to justify: and with such facts in their possession, the Society will be better able either to approve those opinions, on this most important national question, or to point out the mistakes into which I may inadvertently fall.

APPENDIX.

A.—Showing (1) the Imports and Exports of Gold,—(2) the Amount of Gold from Variations in the Circulation (Bank of England Notes

Week Ending	1	2	3 4		5 6 7 8				9
	Imports of Gold.	Exports of Gold.	Gold in the Country.		Gold from Abroad taken into the Bank, and Gold for Export taken out of the Bank. [000's omitted.]				Gold in the Bank. [000's omitted.]
			Increase.	Decrease.	Into Bank.	Out of Bank.	Balance.		
							Into.	Out of.	
1866.									
Mar. 7....	120,366	41,254	79,112	—	135,	—	135,	—	14,051,
" 14....	229,528	17,985	211,543	—	49,	—	49,	—	14,328,
" 21....	70,684	20,960	49,724	—	186,	—	186,	—	14,456,
" 28....	520,299	2,948	517,351	—	429,	—	459,	—	14,362,
April 4....	332,577	22,398	310,184	—	162,	—	162,	—	14,252,
" 11....	60,277	41,769	18,508	—	60,	220,	—	160,	14,234,
" 18....	300,671	200,583	100,088	—	—	4,	—	4,	13,889,
" 25....	124,866	128,403	—	3,587	—	286,	—	286,	13,856,
May 2....	140,489	242,973	—	102,484	44,	99,	—	55,	13,509,
" 9....	44,925	102,347	—	57,422	—	6,	—	—	13,156,
" 16....	328,824	182,435	196,389	—	—	369,	—	369,	12,324,
" 23....	364,164	237,686	126,478	—	217,	216,	1,	—	11,858,
" 30....	1,050,708	1,134,232	—	83,524	1,254,	—	1,254,	—	11,879,
June 6....	2,034,102	365,119	1,668,983	—	1,196,	170,	1,026,	—	13,279,
" 13....	2,395,584	992,900	1,402,684	—	324,	158,	166,	—	14,482,
" 20....	1,347,317	811,389	535,928	—	63,	28,	35,	—	14,851,
" 27....	1,500,454	1,280,421	211,033	—	70,	21,	49,	—	15,042,
July 4....	414,333	568,187	—	153,854	97,	997,	—	931,	14,877,
" 11....	71,859	697,994	—	626,135	101,	272,	—	171,	13,993,
" 18....	704,674	246,738	457,936	—	147,	110,	37,	—	13,646,
" 25....	1,174,486	798,541	375,945	—	168,	38,	130,	—	13,717,
Aug. 1....	569,211	402,321	166,890	—	266,	316,	—	50,	13,793,
" 8....	459,988	376,860	83,128	—	381,	—	381,	—	13,622,
" 15....	469,919	407,226	62,693	—	616,	—	616,	—	14,151,
" 23....	433,050	99,820	333,230	—	993,	102,	891,	—	14,772,
" 29....	1,170,251	112,386	1,057,865	—	557,	150,	407,	—	15,832,
	16,433,606	9,494,870	7,965,692	1,026,956	7,545,	3,587,	5,984,	2,026,	—
	Excess of imports and increase of gold in country				Addition to Bank's stock of gold from abroad				More gold in Bank on Aug. 29, than on Feb. 28.
	£6,938,736		£6,938,736		£3,958,000				£1,866,
Summary for the Six Months—March to August, 1866.									
Excess of imports of gold					Addition to Bank's stock of gold from abroad				£ 3,958,000
Gold added to Bank's stock					Increase of gold in circulation				2,092,000
Gold not taken into Bank					More gold in Bank on August 29, than on February 28 ...				1,866,000
									3,958,000

APPENDIX.

Abroad taken into the Bank, and of Gold for Export taken out of the Bank,—and (3) the and Coin), for each Week during the Crisis of 1866.

10		11	12	13		14	15		16	17	Week Ending
Gold in Circulation, i.e. in the Hands of the Other Banks and Public.			Bank's Note Circulation.	Bank's Note Circulation.			Total Circulation, Notes and Coin.			Bank Rate.	
Increase.	Decrease.	[000's omitted.]		Increase.	Decrease.		Increase.	Decrease.			
51,070	—	20,734	—	83,675	17,325	—	—	—	7	Mch. 7	
—	228,114	20,523	—	211,350	—	439,464	—	—	6	" 14	
58,095	—	20,636	112,525	—	170,620	—	—	—	"	" 21	
552,126	—	21,622	986,130	—	1,538,256	—	—	—	"	" 28	
272,450	—	22,333	710,885	—	983,335	—	—	—	6	April 4	
—	142,171	22,045	—	287,260	—	429,431	—	—	"	" 11	
341,006	—	22,304	258,540	—	599,546	—	—	—	"	" 18	
—	252,659	22,161	—	142,780	—	395,439	—	—	7	" 25	
291,631	—	22,873	711,705	—	1,003,336	—	—	—	8	May 2	
353,000	—	22,344	—	528,425	—	175,425	—	—	9	" 9	
463,335	—	26,121	3,776,600	—	4,239,935	—	—	—	10	" 16	
467,019	—	25,470	—	651,425	—	184,406	—	—	"	" 23	
1,233,010	—	26,019	549,225	—	1,782,235	—	—	—	"	" 30	
—	374,185	25,453	—	565,875	—	940,060	—	—	10	June 6	
—	1,036,934	25,966	513,425	—	—	523,509	—	—	"	" 13	
—	334,225	25,107	—	859,555	—	1,198,780	—	—	"	" 20	
—	142,279	24,824	—	282,800	—	425,079	—	—	"	" 27	
—	765,548	25,812	987,875	—	222,327	—	—	—	10	July 4	
712,477	—	25,193	—	619,085	—	93,412	—	—	"	" 11	
384,495	—	25,421	228,550	—	613,045	—	—	—	"	" 18	
59,146	—	25,263	—	158,290	—	98,144	—	—	"	" 25	
—	126,571	25,520	256,860	—	130,349	—	—	—	10	Aug. 1	
551,911	—	25,042	—	477,750	—	74,161	—	—	"	" 8	
87,473	—	24,540	—	502,200	—	414,727	—	—	8	" 15	
269,736	—	24,182	—	357,885	—	88,149	—	—	7	" 22	
—	652,800	23,896	—	286,605	—	427,405	—	—	6	" 29	
6,147,950	4,055,800	—	9,092,320	5,964,910	11,467,882	5,736,018	—	—	—		
Increase of Gold in circulation at end of August, £2,092,150			Increase of Note circulation at end of August, £3,127,410			Total increase of circulation at end of August, £5,731,864					
Month of May, 1866.						Next Five Weeks, ending July 4, 1866.					
Increase of Gold in circulation 2,807,995						Gold returned to Bank } 2,653,171					
" Notes 3,857,680						Notes returned to Bank } 206,930					
Total increase of Circulation 6,665,675						Decrease of circulation } 2,860,101					

B.—Parliamentary Return. *Bank Notes Issued by the Issue Department of the Bank of England in each Week, from the 21st day of February, 1866, to the 25th day of July, 1866.*

[000's omitted.]

Week ending	£5 Notes.	£10 Notes.	£20 to £100 Notes.	£200 to £500 Notes.	£1,000 Notes.	Notes held by the Public.	Notes held by the Bank.	Total Issue.	Securities.	Bullion.
1866.	£	£	£	£	£	£	£	£	£	£
Feb. 21....	7,389,	4,005,	5,916,	1,590,	1,663,	20,563,	7,409,	27,972,	15,000,	12,972,
„ 28....	7,354,	3,992,	6,090,	1,705,	1,627,	20,768,	7,345,	28,113,	„	13,113,
Mar. 7....	7,363,	3,995,	6,064,	1,649,	1,664,	20,735,	7,416,	28,151,	15,000,	13,151,
„ 14....	7,296,	3,975,	5,955,	1,597,	1,700,	20,523,	7,905,	28,428,	„	13,428,
„ 21....	7,299,	3,984,	6,014,	1,631,	1,708,	20,636,	7,918,	28,554,	„	13,554,
„ 28....	7,594,	4,166,	6,328,	1,753,	1,781,	21,622,	6,881,	28,503,	„	13,503,
April 4....	7,913,	4,271,	6,548,	1,915,	1,686,	22,333,	6,153,	28,486,	15,000,	13,486,
„ 11....	7,989,	4,262,	6,435,	1,634,	1,725,	22,045,	6,318,	28,363,	„	13,363,
„ 18....	8,052,	4,307,	6,424,	1,779,	1,742,	22,304,	5,738,	28,042,	„	13,042,
„ 25....	8,037,	4,291,	6,439,	1,740,	1,654,	22,161,	5,844,	28,005,	„	13,005,
May 2....	8,115,	4,332,	6,760,	1,954,	1,712,	22,873,	4,839,	27,712,	15,000,	12,712,
„ 9....	8,063,	4,299,	6,482,	1,798,	1,703,	22,345,	4,950,	27,295,	„	12,295,
„ 16....	8,711,	4,876,	8,185,	2,337,	2,012,	26,121,	731,	26,852,	„	11,852,
„ 23....	8,610,	4,764,	7,825,	2,248,	2,022,	25,469,	831,	26,300,	„	11,300,
„ 30....	8,520,	4,829,	8,154,	2,393,	2,123,	26,019,	415,	26,434,	„	11,434,
June 6....	8,548,	4,718,	7,902,	2,256,	2,029,	25,453,	2,167,	27,620,	15,000,	12,620,
„ 13....	8,576,	4,860,	8,156,	2,276,	2,098,	25,966,	2,730,	28,696,	„	13,696,
„ 20....	8,427,	4,803,	7,899,	2,103,	1,875,	25,107,	4,067,	29,174,	„	14,174,
„ 27....	8,445,	4,769,	7,726,	2,006,	1,878,	24,824,	4,347,	29,171,	„	14,171,
July 4....	8,752,	4,877,	7,995,	2,180,	2,008,	25,812,	3,336,	29,148,	15,000,	14,148,
„ 11....	8,770,	4,851,	7,674,	1,968,	1,930,	25,193,	3,095,	28,288,	„	13,288,
„ 18....	8,822,	4,894,	7,675,	1,944,	2,086,	25,421,	2,499,	27,920,	„	12,920,
„ 25....	8,787,	4,883,	7,687,	2,002,	1,904,	25,263,	2,630,	27,893,	„	12,893,

C.—Showing the Position of the Bank of England and Bank of France.

1866.	Imports and Exports of Coin and Bullion. March 1 to August 31, 1866. [000's omitted.]						1866.	Coin and Bullion in Banks of England and France. [000's omitted.]			
	England.			France.				England.	Bank Rate.	France.	Bank Rate.
	Imports.	Exports.	Excess of Imports.	Imports.	Exports.	Excess of Imports.					
	£	£	£	£	£	£		£	Per cent.	£	Pr. ct.
March	1,520,	693,	827,	1,938,	1,057,	881,	Moh. 7	14,051,	7	18,648,	4
							" 14	14,328,	6	18,874,	—
							" 21	14,456,	—	19,808,	3½
							" 28	14,362,	—	20,334,	—
April ..	1,289,	843,	446,	2,304,	1,298,	1,006,	April 4	14,252,	—	20,193,	—
							" 11	14,234,	—	20,149,	—
							" 18	13,889,	—	20,418,	—
							" 25	13,856,	7	20,707,	—
May	2,521,	2,258,	263,	4,076,	1,119,	2,957,	May 2	13,509,	8	21,076,	—
							" 9	13,156,	9	20,809,	—
							" 16	12,324,	10	20,585,	—
							" 23	11,858,	—	21,466,	4
June ..	7,137,	3,789,	3,348,	10,575,	3,119,	7,456,	" 30	11,879,	—	22,524,	—
							June 6	13,279,	—	24,093,	—
							" 13	14,482,	—	24,523,	—
							" 20	14,851,	—	25,097,	—
July	3,513,	2,691,	822,	5,853,	3,450,	2,403,	" 27	15,042,	—	25,985,	—
							July 4	14,877,	—	26,730,	—
							" 11	13,993,	—	26,292,	—
							" 18	13,646,	—	26,868,	—
Aug.	4,475,	2,551,	1,924,	4,500,	1,376,	3,124,	" 25	13,717,	—	27,583,	3½
							Aug. 1	13,793,	—	28,275,	—
							" 8	13,622,	—	29,021,	—
							" 15	14,151,	8	29,234,	—
Total ..	20,455,	12,826,	7,630,	29,245,	11,419,	17,827,	" 22	14,772,	7	29,763,	—
							" 29	15,320,	6	29,804,	3
							—	—	—	—	

D.—Lord Clarendon's Circular on the Crisis of 1866.

"FOREIGN OFFICE,

"May 12, 1866.

"SIR,—The monetary crisis through which this country is now passing, will naturally attract great attention to other countries, and it is therefore desirable that a clear conception should be formed, both of its nature and probable extent, but more particularly of the measures which Her Majesty's Government have adopted to enable the mercantile community to meet the difficulties of the present situation.

"Long-continued prosperity in commercial affairs, and the general wealth consequent on it, have produced their ordinary results in encouraging speculation, especially of a monetary or financial character, and fostering hopes of acquiring wealth by more speedy means than are presented by the ordinary method of commercial industry. Again, the events which are taking place on the continent have tended not only to produce immediate derangement in commercial transactions, but also to shake that confidence in the future without which a return to a sound state in monetary matters was not to be looked for.

"The immediate cause, however, of the crisis lay in the stoppage of the great discount house of Overend, Gurney, and Co., in whose hands were lodged many millions sterling, which, in other times, would in great part have formed, and which, perhaps, ought to have formed, the reserve of the various private and joint-stock banks of the country. This failure directed the action of the panic against the banks in London, and it was to be apprehended that the movement in the capital would be followed by a similar agitation in the rest of the kingdom, where, in addition to the large deposits in the hands of the bankers, there are many millions of paper circulation resting only on the commercial credit of the issuers.

"In this state of things it could not be surprising that the reserve of the Bank of England was heavily affected yesterday, and it was the combined consideration of what had then actually happened, and of what might follow on subsequent days, which induced Her Majesty's Government to adopt the measure on which, in the course of the evening, they decided. For, the money drawn from the banks having been withdrawn from circulation under the influence of panic, the Bank of England might, without some new resource, have been unable to continue its accustomed assistance. Thus the crisis which had been anxiously apprehended from this combination of circumstances, has come at last, but with a severity and suddenness, in regard to its immediate consequences, which could not have been anticipated.

"The Bank of England is prepared to extend relief to the utmost of its means, to all cases which are justly deserving of its support; while Her Majesty's Government, in full reliance on the eventual sanction of Parliament, if it should be necessary to go

beyond the law as it now stands, have signified to the Bank of England their permission to hold itself free from the observance of the ordinary limitations on its issues, if the exigencies of the time require such an extraordinary measure. Her Majesty's Government trust, that by this timely assistance, all commercial establishments which are based on sound principles, and have been conducted with proper prudence, will be enabled to withstand the shock to which the panic occasioned by the recent great failure in the City will have exposed them. Her Majesty's Government have no reason to apprehend that there is any general want of soundness in the ordinary trade of this country which can give reasonable ground for anxiety or alarm, either in this country or abroad; they are satisfied, on the contrary, that the present crisis, peculiar and unprecedented as it is, is one of a character essentially more favourable than others which have been successfully passed through; and all that is required is, that all classes should co-operate with the Government in endeavouring to allay needless alarm, and in acting with prudence and forbearance while so much agitation prevails.

"It appears to Her Majesty's Government to be of great importance that the commercial interests abroad should be reassured in regard to what is passing in this country; and I have, therefore, lost no time in authorising you to make known to the Government to which you are accredited, and generally to those who have a direct interest in such matters, the view taken by Her Majesty's Government of the present state of affairs, the active measures which have been adopted to avert any evil consequences, and the confidence which Her Majesty's Government feel that those measures will be attended with success.

"The abatement of the panic in the City this morning is, Her Majesty's Government trust, an earnest of the good result likely to attend the measures which they have authorised the Bank of England to adopt.

"I am, with great truth,

"Your most obedient humble Servant,

"CLARENDON."

E.—Effects of the Quarterly Monetary Tides upon the Bank of England, 1862-69:—
 Showing (1) the Amount of the Government Payments, as Indicated by the Decrease in the Government Deposits; (2) the Increase of Private Deposits, chiefly in consequence of the Government Payments; (3) the Increase of the Private Securities (Loans to the Public), in consequence of the Quarterly Payments of Rent, &c., on the part of the Public; (4) the Increase in the Note Circulation, in connection with those Payments on the part of the Government and the Public. The approach of the Quarterly Tide is first Indicated by an Increase in the Private Securities: then come, almost simultaneously, the Government Payments, and the Increase in the Private Deposits and in the Note Circulation.

[000's omitted.]

	Government Deposits.		Private Deposits.		Private Securities.		Circulation.
	£		£		£		£
Jan. 1, 1862	7,341,		—	Dec. 18, '61	16,523,	Dec. 25, '61	20,201,
" 8, "	4,543,	Dec. 25, '61	13,310,	" 25, "	16,826,	Jan. 1, '62	20,818,
	—	Jan. 1, '62	15,036,	Jan. 1, '62	18,761,	" 8, "	21,067,
	—	" 8, "	18,206,		—	" 15, "	21,461,
	—		—		—	" 22, "	21,698,
Decrease	2,803,	Increase	4,897,	Increase	2,238,	Increase	1,497,
April 2, 1862	8,456,	Mar. 26, '62	13,154,	Mar. 26, '62	18,245,	Mar. 26, '62	20,815,
" 9, "	5,625,	April 2, "	13,623,	April 2, "	18,906,	April 2, "	21,502,
" 16, "	5,225,	" 9, "	16,336,		—	" 9, "	21,822,
	—		—		—	" 16, "	22,048,
Decrease	3,231,	Increase	3,182,	Increase	661,	Increase	2,234,
July 2, 1862	9,672,	June 25, '62	13,399,	June 25, '62	20,243,	June 25, '62	21,173,
" 9, "	5,430,	July 2, "	13,852,	July 2, "	21,529,	July 2, "	22,242,
" 16, "	5,223,	" 9, "	17,199,		—	" 9, "	22,504,
	—		—		—	" 16, "	23,065,
Decrease	4,449,	Increase	3,800,	Increase	1,286,	Increase	1,912,
Sept. 24, 1862	9,268,	Oct. 1, '62	13,595,	Sept. 17, '62	19,493,	Sept. 24, '62	21,307,
Oct. 1, "	8,487,	" 8, "	13,530,	" 24, "	19,525,	Oct. 1, "	22,365,
" 8, "	8,334,	" 15, "	15,712,	Oct. 1, "	19,791,	" 8, "	22,138,
" 15, "	6,254,	" 22, "	15,198,		—	" 15, "	22,395,
" 22, "	5,944,	" 29, "	16,456,		—		—
Decrease	3,324,	Increase	2,925,	Increase	299,	Increase	1,095,
Dec. 24, 1862	8,654,	Dec. 24, '62	14,306,	Dec. 17, '62	19,358,	Dec. 24, '62	20,150,
" 31, "	8,339,	" 31, "	15,469,	" 24, "	20,115,	" 31, "	20,516,
Jan. 7, 1863	8,783,	Jan. 7, '63	14,393,	" 31, "	21,146,	Jan. 7, '63	20,930,
" 14, "	4,280,	" 14, "	16,773,		—	" 14, "	21,019,
Decrease	4,502,	Increase	2,466,	Increase	1,788,	Increase	868,

E.—Effects of the Quarterly Monetary Tides upon the Bank of England—Contd.

[000's omitted.]

	Government Deposits.		Private Deposits.		Private Securities.		Circulation.
	£		£		£		£
Mar. 25, 1863	10,364,	Mar. 25, '63	12,742,	Mar. 18, '63	20,192,	Mar. 25, '63	20,136,
April 1, "	10,107,	April 1, "	13,172,	" 25, "	20,505,	April 1, "	20,965,
" 8, "	6,714,	" 8, "	14,830,	April 1, "	21,310,	" 8, "	21,279,
" 15, "	5,769,	" 15, "	15,013,		—	" 15, "	21,327,
	—		—		—	" 22, "	21,413,
Decrease	4,595,	Increase	2,271,	Increase	1,119,	Increase	1,277,
July 1, 1863	10,356,	June 24, '63	13,810,	June 24, '63	21,408,	June 24, '63	20,526,
" 8, "	5,594,	July 1, "	16,275,	July 1, "	25,343,	July 1, "	21,739,
" 15, "	4,948,	" 8, "	18,596,		—	" 8, "	22,048,
	—		—		—	" 15, "	22,195,
Decrease	5,408,	Increase	4,786,	Increase	3,935,	Increase	1,669,
Sept. 30, 1863	9,270,	Sept. 23, '63	12,860,	Sept. 16, '63	19,414,	Sept. 23, '63	21,516,
Oct. 7, "	9,510,	" 30, "	13,717,	" 23, "	19,723,	" 30, "	22,313,
" 14, "	4,616,	" 30, "	12,894,	" 30, "	22,513,	Oct. 7, "	22,545,
" 21, "	4,438,	" 30, "	16,353,	Oct. 7, "	22,592,	" 14, "	22,561,
Decrease	5,072,	Increase	3,493,	Increase	3,178,	Increase	1,345,
Dec. 30, 1863	10,842,	Dec. 23, '63	12,712,	Dec. 23, '63	21,411,	Dec. 23, '63	20,263,
Jan. 6, '64	10,002,	" 30, "	13,021,	" 30, "	22,354,	" 30, "	20,687,
" 13, "	5,264,	Jan. 6, '64	13,053,	Jan. 6, '64	22,433,	Jan. 6, '64	21,322,
	—	" 13, "	15,412,		—	" 13, "	21,396,
Decrease	4,738,	Increase	2,700,	Increase	1,022,	Increase	1,134,
Mar. 30, 1864	10,280,	Mar. 23, '64	12,480,	Mar. 23, '64	20,742,	Mar. 23, '64	20,367,
April 6, "	9,819,	" 30, "	12,659,	" 30, "	22,199,	" 30, "	20,909,
" 13, "	5,930,	April 6, "	13,348,	April 6, "	22,853,	April 6, "	21,529,
" 20, "	5,787,	" 13, "	13,586,		—	" 13, "	21,786,
	—	" 20, "	13,684,		—		—
Decrease	4,493,	Increase	1,204,	Increase	2,111,	Increase	1,419,
June 29, 1864	10,214,	June 29, '64	12,800,	June 22, '64	20,730,	June 22, '64	20,625,
July 6, "	9,489,	July 6, "	13,471,	" 29, "	22,079,	" 29, "	21,154,
" 13, "	4,684,	" 13, "	15,083,	July 6, "	23,067,	July 6, "	21,890,
" 20, "	4,462,		—		—	" 13, "	22,161,
	—		—		—	" 20, "	22,308,
Decrease	5,751,	Increase	2,283,	Increase	2,338,	Increase	1,677,
Sept. 28, 1864	7,084,	Oct. 5, '64	11,732,	Sept. 21, '64	19,901,	Sept. 28, '64	20,752,
Oct. 5, "	6,878,	" 12, "	13,206,	" 28, "	20,404,	Oct. 5, "	21,916,
" 12, "	7,023,	" 19, "	14,098,	Oct. 5, "	20,837,	" 12, "	21,574,
" 19, "	3,274,		—	" 12, "	21,923,	" 19, "	21,829,
Decrease	3,810,	Increase	2,367,	Increase	2,022,	Increase	1,077,

E.—Effects of the Quarterly Monetary Tides upon the Bank of England—Contd.

[000's omitted.]

	Government Deposits.		Private Deposits.		Private Securities.		Circulation.
	£		£		£		£
Dec. 28, 1864	8,601,	Dec. 28, '64	13,041,	Dec. 21, '64	18,754,	Dec. 28, '64	19,810,
Jan. 4, '65	8,500,	Jan. 4, '65	13,875,	" 28, "	19,787,	Jan. 4, '65	21,007,
" 11, "	4,446,	" 11, "	16,174,	Jan. 4, '65	21,712,	" 11, "	21,013,
" 18, "	4,185,		—		—	" 18, "	21,224,
Decrease	4,414,	Increase	3,134,	Increase	2,967,	Increase	1,413,
Mar. 29, 1865	9,839,	Mar. 29, '65	13,478,	Mar. 15, '65	20,084,	Mar. 22, '65	20,029,
April 5, "	9,332,	April 5, "	14,172,	" 22, "	21,264,	" 29, "	20,389,
	5,826,	" 12, "	15,415,	" 29, "	21,151,	April 5, "	21,353,
	—		—	April 5, "	21,515,	" 12, "	21,751,
Decrease	4,013,	Increase	1,936,	Increase	1,431,	Increase	1,722,
June 28, 1865	10,488,	June 28, '65	13,724,	June 21, '65	20,750,	June 21, '65	21,154,
July 5, "	9,349,	July 5, "	14,443,	" 28, "	22,036,	" 28, "	21,478,
" 12, "	4,590,	" 12, "	16,229,	July 5, "	23,230,	July 5, "	22,718,
	—		—		—	" 12, "	22,944,
Decrease	5,898,	Increase	2,505,	Increase	2,479,	Increase	1,790,
Oct. 4, 1865	6,892,	Sept. 27, '65	14,492,	Sept. 27, '65	21,257,	Sept. 27, '65	22,133,
" 11, "	7,229,	Oct. 4, "	13,799,	Oct. 4, "	24,170,	Oct. 4, "	23,322,
" 18, "	3,589,	" 11, "	13,506,	" 11, "	—	" 11, "	22,862,
	—	" 18, "	14,014,	" 18, "	—	" 18, "	22,884,
	—		—	" 25, "	—	" 25, "	23,370,
Decrease	3,303,	Decrease	986,	Increase	2,913,	Increase	1,233,
Dec. 28, 1865	8,544,	Dec. 28, '65	13,236,	Dec. 20, '65	21,618,	Dec. 28, '65	20,864,
Jan. 4, 1866	7,579,	Jan. 4, '66	14,728,	" 28, "	22,507,	Jan. 4, '66	22,222,
" 11, "	3,614,	" 11, "	16,232,	Jan. 4, '66	24,732,	" 11, "	21,901,
" 18, "	3,270,		—		—		—
Decrease	5,274,	Increase	2,996,	Increase	3,104,	Increase	1,358,
Mar. 28, 1866	8,375,	Mar. 28, '66	13,332,	Mar. 21, '66	19,392,	Mar. 21, '66	21,033,
April 4, "	7,693,	April 4, "	13,351,	" 28, "	21,879,	" 28, "	22,008,
" 11, "	4,057,	" 11, "	14,956,	April 4, "	22,095,	April 4, "	22,776,
" 18, "	4,045,		—		—		—
Decrease	4,330,	Increase	1,624,	Increase	2,702,	Increase	1,743,
June 27, 1866	7,965,	June 27, '66	20,840,	June 20, '66	31,209,	June 27, '66	25,388,
July 4, "	6,800,	July 5, "	19,940,	" 27, "	30,884,	July 5, "	26,486,
" 11, "	2,727,	" 11, "	21,472,	July 5, "	30,750,	" 11, "	25,899,
" 18, "	2,162,		—		—	" 18, "	26,186,
Decrease	5,804,	Increase	1,533,	Increase	1,460,	Increase	1,114,

E.—Effects of the Quarterly Monetary Tides upon the Bank of England—Contd.

[000's omitted.]

	Government Deposits.		Private Deposits.		Private Securities.		Circulation.
	£		£		£		£
Sept. 26, 1866	6,389,	Oct. 3, '66	17,210,	Sept. 26, '68	21,752,	Sept. 26, '68	23,627,
Oct. 3, "	6,169,	" 10, "	17,455,	Oct. 3, "	22,941,	Oct. 3, "	24,996,
" 10, "	6,266,	" 17, "	18,779,		—		—
" 17, "	3,393,		—		—		—
" 24, "	3,218,		—		—		—
Decrease	3,171,	Increase	1,569,	Increase	1,189,	Increase	1,869,
Dec. 26, 1866	8,706,	Dec. 26, '66	18,592,	Dec. 19, '66	19,825,	Dec. 26, '66	22,384,
Jan. 2, '67	8,162,	Jan. 2, '67	20,592,	" 26, "	20,241,	Jan. 2, '67	23,746,
" 9, "	4,444,	" 9, "	23,050,	Jan. 2, '67	22,817,	" 9, "	23,796,
	—		—		—	" 16, "	23,810,
Decrease	4,262,	Increase	4,457,	Increase	2,991,	Increase	426,
Mar. 27, 1867	9,324,	Mar. 27, '67	17,170,	Mar. 20, '67	18,877,	Mar. 27, '67	22,828,
April 3, "	8,619,	April 3, "	17,671,	" 27, "	20,018,	April 3, "	23,656,
" 10, "	8,711,	" 10, "	19,046,	April 3, "	20,752,	" 10, "	23,660,
" 17, "	5,398,	" 17, "	—		—	" 17, "	23,907,
Decrease	3,925,	Increase	1,876,	Increase	1,875,	Increase	1,079,
June 26, 1867	11,105,	June 26, '67	17,854,	June 19, '67	18,516,	June 26, '67	23,786,
July 3, "	9,357,	July 3, "	18,868,	" 26, "	20,098,	July 3, "	24,824,
" 10, "	5,121,	" 10, "	21,233,	July 3, "	20,456,	" 10, "	24,509,
" 17, "	4,618,		—		—	" 17, "	24,673,
Decrease	6,487,	Increase	3,378,	Increase	1,940,	Increase	1,089,
Sept. 25, 1867	8,361,	Sept. 25, '67	18,919,	Sept. 25, '67	17,122,	Sept. 25, '67	23,951,
Oct. 2, "	7,527,	Oct. 2, "	18,430,	Oct. 2, "	17,253,	Oct. 2, "	25,460,
" 9, "	7,557,	" 9, "	18,303,	" 9, "	17,164,	" 9, "	25,080,
" 16, "	4,457,	" 16, "	20,433,		—	" 16, "	25,596,
" 23, "	4,408,		—		—		—
Decrease	3,953,	Increase	2,130,	Increase	131,	Increase	1,646,
Dec. 25, 1867	7,179,	Dec. 25, '67	18,766,	Dec. 18, '67	17,219,	Dec. 25, '67	23,981,
Jan. 1, '68	6,314,	Jan. 1, '68	21,655,	" 25, "	17,519,	Jan. 1, '68	24,242,
" 8, "	3,651,	" 8, "	23,417,	Jan. 1, '68	20,125,	" 8, "	24,880,
" 15, "	3,225,		—		—	" 15, "	24,905,
Decrease	3,954,	Increase	4,650,	Increase	2,906,	Increase	1,075,
Mar. 25, 1868	7,287,	Mar. 25, '68	19,502,	Mar. 18, '68	17,967,	Mar. 25, '68	23,335,
April 1, "	6,910,	April 1, "	20,292,	" 25, "	19,040,	April 1, "	24,692,
" 8, "	3,894,	" 8, "	21,147,	April 1, "	20,698,	" 8, "	25,124,
Decrease	3,393,	Increase	1,644,	Increase	2,731,	Increase	1,789,

E.—Effects of the Quarterly Monetary Tides upon the Bank of England—Contd.

[000's omitted.]

	Government Deposits.		Private Deposits.		Private Securities.		Circu- lation.
	£		£		£		£
June 24, 1868	8,095,	June 24, '68	19,531,	June 24, '68	18,160,	June 24, '68	24,154,
July 1, "	7,021,	July 1, "	21,497,	July 1, "	20,452,	July 1, "	25,224,
" 8, "	4,396,	" 7, "	23,158,	" "	—	" "	—
" 15, "	3,360,	" "	—	" "	—	" "	—
" 22, "	3,140,	" "	—	" "	—	" "	—
Decrease	4,955,	Increase	3,627,	Increase	2,291,	Increase	1,070,
Sept. 30, 1868	5,385,	Sept. 30, '68	18,735,	Sept. 23, '68	15,999,	Sept. 23, '68	24,175,
Oct. 7, "	5,307,	Oct. 7, "	18,022,	" 30, "	16,367,	" 30, "	25,013,
" 14, "	3,838,	" 14, "	20,231,	Oct. 7, "	16,054,	Oct. 7, "	25,297,
" 21, "	3,550,	" 21, "	20,406,	" "	—	" "	—
Decrease	1,835,	Increase	2,383,	Increase	368,	Increase	1,122,
Dec. 30, 1868	7,302,	Dec. 23, '68	17,851,	Dec. 16, '68	17,495,	Dec. 23, '68	23,374,
Jan. 6, '69	6,466,	" 30, "	19,489,	" 23, "	18,339,	" 30, "	23,917,
" 13, "	3,638,	Jan. 6, '69	19,496,	" 30, "	20,781,	Jan. 6, '69	24,447,
" "	—	" 13, "	21,118,	" "	—	" 13, "	24,625,
Decrease	3,664,	Increase	3,267,	Increase	3,286,	Increase	1,251,
Mar. 31, 1869	7,891,	Mar. 24, '69	17,033,	Mar. 24, '69	19,124,	Mar. 24, '69	23,370,
April 7, "	4,755,	" 31, "	17,479,	" 31, "	20,131,	" 31, "	24,090,
" 14, "	4,306,	April 7, "	18,803,	" "	—	April 7, "	24,452,
Decrease	3,585,	Increase	1,770,	Increase	1,006,	Increase	1,062,
June 30, 1869	8,762,	June 23, '69	16,973,	June 23, '69	16,465,	June 23, '69	23,129,
July 7, "	4,456,	" 30, "	19,150,	" 30, "	20,552,	" 30, "	23,845,
" 14, "	3,920,	July 7, "	21,091,	" "	—	July 7, "	24,471,
Decrease	4,842,	Increase	4,129,	Increase	4,087,	Increase	1,342,
Sept. 29, 1869	5,590,	Sept. 29, '69	17,222,	Sept. 22, '69	14,825,	Sept. 22, '69	23,595,
Oct. 6, "	3,971,	Oct. 6, "	19,642,	" 29, "	16,697,	" 29, "	24,276,
" 13, "	3,489,	" "	—	Oct. 6, "	16,378,	Oct. 6, "	23,834,
" "	—	" "	—	" "	—	" 13, "	24,816,
Decrease	2,102,	Increase	2,420,	Increase	1,873,	Increase	1,221,

E *contd.*—SUMMARY, 1862-69.

[000's omitted.]

Year.	Quarter.	Government Deposits (Decrease).	Private Deposits (Increase).	Private Securities (Increase).	Note Circulation (Increase).	Gold in Circulation (Increase).
1862	January.....	£ 2,808,	£ 4,897,	£ 2,239,	£ 1,497,	—
'63	"	4,502,	2,466,	1,788,	889,	—
'64	"	4,738,	2,700,	1,022,	1,184,	—
'65	"	4,415,	1,413,	3,134,	2,967,	—
'66	"	5,274,	1,358,	2,996,	3,104,	—
'67	"	4,262,	426,	4,457,	2,991,	—
'68	"	3,954,	1,075,	4,650,	2,906,	50,
'69	"	3,664,	1,251,	3,267,	3,286,	—
		38,611,	15,586,	23,553,	18,754,	—
	Average.....	4,201,	1,948,	2,944,	2,344,	—
1862	April	2,232,	3,182,	661,	2,234,	—
'63	"	4,595,	2,271,	1,119,	1,277,	—
'64	"	4,493,	1,204,	2,111,	1,419,	—
'65	"	4,013,	1,722,	1,936,	1,431,	—
'66	"	4,330,	1,743,	1,624,	2,702,	—
'67	"	3,925,	1,079,	1,876,	1,875,	—
'68	"	3,393,	1,789,	1,644,	2,732,	{ 732,—2 weeks ending April 15
'69	"	3,585,	1,082,	1,770,	1,006,	
		31,566,	14,072,	12,741,	14,676,	—
	Average.....	3,946,	1,759,	1,593,	1,834,	—
1862	July	4,449,	3,801,	1,286,	1,913,	—
'63	"	5,406,	4,786,	3,935,	1,669,	—
'64	"	5,751,	2,283,	2,338,	1,678,	—
'65	"	5,898,	1,790,	2,505,	2,479,	—
'66	"	5,804,	1,114,	1,533,	1,460,	—
'67	"	6,487,	1,089,	3,378,	1,940,	—
'68	"	4,955,	1,070,	3,627,	2,291,	{ 715,—3 weeks ending July 15
'69	"	4,842,	1,342,	4,129,	4,087,	
		48,594,	17,275,	22,731,	14,597,	—
	Average.....	5,449,	2,159,	2,841,	1,825,	—
1862	October.....	3,324,	2,925,	299,	1,095,	—
'63	"	5,072,	3,493,	3,178,	1,845,	—
'64	"	3,810,	2,367,	2,021,	1,077,	—
'65	"	3,808,	1,238,	985,	3,914,	—
'66	"	3,171,	1,369,	1,569,	1,189,	—
'67	"	3,953,	1,646,	2,130,	181,	—
'68	"	1,835,	1,123,	2,383,	868,	{ 1,500,—4 weeks ending October 31
'69	"	2,102,	1,221,	2,420,	1,878,	
		26,570,	15,381,	13,015,	10,991,	—
	Average.....	3,321,	1,923,	1,627,	1,874,	—

F.—Table showing (Cols. 1 and 2) the Balance of Gold taken into Bank from Abroad, and of Gold taken out of Bank for Export; Col. 3 the Amount of Gold in Bank, and Cols. 4 and 5 the Increase and Decrease of Gold Coin in Home Circulation. (Gold in Bank on 25th December, 1867, = £21,941,047).

[000's omitted.]

1868. — Week ending	1 2 Balance.		3 Gold in Bank.	4 5 Gold in Circulation.		1868. — Week ending	1 2 Balance.		3 Gold in Bank.	4 5 Gold in Circulation.	
	In.	Out.		In- crease.	De- crease.		In.	Out.		In- crease.	De- crease.
Jan. 1....	£ 71,	—	£ 22,002,	—	£ 50,	July 1	£ 107,	—	£ 22,751,	£ 319,	—
" 8....	53,	—	22,061,	55,	—	" 8	74,	—	22,552,	274,	—
" 15....	—	23,	22,086,	—	49,	" 15	—	241,	22,187,	124,	—
" 22....	—	26,	22,201,	—	141,	" 22	17,	—	22,077,	126,	—
" 29....	—	89,	22,320,	—	208,	" 29	—	55,	22,965,	—	942,
Feb. 5....	—	529,	21,755,	35,	—	Aug. 5	—	200,	22,372,	393,	—
" 12....	—	446,	21,605,	—	295,	" 12	150,	—	20,801,	1,721,	—
" 19....	—	537,	21,192,	—	124,	" 19	86,	—	20,735,	152,	—
" 26....	—	108,	21,350,	—	261,	" 26	82,	—	20,774,	43,	—
Mar. 4....	—	252,	21,136,	—	38,	Sept. 2	260,	—	20,847,	187,	—
" 11....	—	73,	21,180,	—	116,	" 9	123,	—	20,736,	234,	—
" 18....	—	11,	21,281,	—	113,	" 16	32,	—	20,776,	—	8,
" 25....	—	11,	21,438,	—	168,	" 23	298,	—	20,965,	104,	—
April 1....	—	143,	21,104,	181,	—	" 30	281,	—	20,501,	695,	—
" 8....	82,	—	20,825,	361,	—	Oct. 7	159,	—	20,708,	—	48,
" 15....	77,	—	20,711,	191,	—	" 14	—	10,	20,164,	534,	—
" 22....	—	224,	20,527,	—	40,	" 21	106,	—	19,947,	323,	—
" 29....	110,	—	20,633,	4,	—	" 28	—	71,	19,845,	31,	—
May 6....	—	53,	20,403,	177,	—	Nov. 4	—	204,	19,478,	163,	—
" 13....	—	144,	20,291,	—	32,	" 11	—	120,	19,359,	—	1,
" 20....	290,	—	20,789,	—	208,	" 18	—	176,	18,357,	826,	—
" 27....	315,	—	21,291,	—	187,	" 25	—	158,	18,257,	—	58,
June 3....	627,	—	21,970,	—	52,	Dec. 2	—	165,	18,037,	54,	—
" 10....	181,	—	22,205,	—	104,	" 9	—	118,	17,842,	78,	—
" 17....	135,	—	22,571,	—	231,	" 16	65,	—	18,158,	—	252,
" 24....	212,	—	22,963,	—	180,	" 23	26,	—	18,292,	—	107,
						" 30	66,	—	18,446,	—	88,
	2,103,	2,663,	—	1,004,	2,596,		1,877,	1,518,	—	6,380,	1,504,
	£560, out			Decr. £1,592,			£350, into			Incr. £4,876,	

SUMMARY.

	£	£
Less Gold in Bank on 30th December, 1868, than } on 25th December, 1867	—	3,495,189
Gold taken out of Bank for export.....	201,000	
Increase of Gold in circulation	3,284,189	
		3,485,189*

* There is an error of 10,000l. here in the result of the calculations, but I cannot discover the source of it.

On the Incidence of Local Taxation.

By PROFESSOR JAMES E. THOROLD ROGERS, M.A.

[Read before the Statistical Society, May, 1870.]

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I.—The Paper.

LOCAL taxation (by which I understand the levy of certain rates on the occupiers or owners of real estate, with the object of meeting the costs of certain branches of public expenditure) has become by reason of its magnitude, its rapid increase, and the facility which it offers for carrying out any project of legislation, the ends of which can only be attained by increasing the public burdens, a matter of great present interest. They who advocate any such change or reform as involves expense, always suggest either that the costs should be defrayed from the rates, or should be put on the consolidated fund. As, however, it is supposed that the administration of these charges is most economically conducted when the representatives of the ratepayers impose the tax, the balance of opinion is rather in favour of raising these charges by local taxation. It is probable that there is no small reason for this opinion. An elected board of administrators is constantly charged with niggardliness, very rarely with profuseness. The heads of Government departments are very seldom accused of stinginess or even economy, but the complaint of excessive and wasteful expenditure is frequently raised against them. Local rates, too, are criticised with tolerable severity; imperial taxation, which till latterly has grown as rapidly as local, is endured with patience, and attempts to reduce it are frequently unpopular. The taxation, too, which is levied locally is direct; and however true it may be in the abstract, that a taxpayer contributes as effectually, whether he pays 25 per cent. on the value of his tea and sugar, or is rated to the tenement which he occupies in an equal amount, he is certainly more sensitive to the latter than he is to the former, and therefore is more likely to claim value received for the contribution which he makes.

The question of local taxation is resolved into three topics—its amount, its incidence, and its compensations. I purpose to devote the greater part of this paper to the second of these subjects, but

it will be impossible to omit reference to the third. It is possible that a local tax may be nothing but a compulsory investment of capital, and that the investment may return a handsome interest to the contributor. It is possible that a local tax may be only an indirect means of distributing, with greater or less equity, a proportion of those business expenses which are necessary towards carrying on any industrial undertaking, and that the form which the tax takes may be one by which those expenses are materially lightened. It may even shift them on the shoulders of those who do not share in any of the profits obtained by the industry which has been undertaken. It is possible that, in consideration of real or presumed charges of an exceptional nature, levied on the owners or occupiers of real estate, certain exemptions or privileges are granted to such owners or occupiers which not only make up for what is really exceptional, but actually confer certain solid advantages on those who, unconsciously no doubt, have clamoured that they are liable to peculiar burdens which do not exist, and therefore obtain peculiar compensations, which they certainly ought not to have. It will not, I think, be difficult in the course of this paper to illustrate these cases.

According to a Parliamentary paper (compiled at the instance of Mr. Ward Hunt, the totals of which are comprised in a paper read by Mr. Purdy before Section F at the Exeter Meeting of the British Association, and printed in the Transactions of this Society), the amount of local taxation in England and Wales raised in rateable areas is given at 16,733,000*l*.* By far the greatest part of these taxes, whatever their ultimate incidence may be, is paid in the first instance by the occupier. In Scotland and Ireland, on the other hand, the local taxes are for the most part paid in equal moieties by the owner and the occupier. We shall, I hope, see in the course of this paper that this distinction is not unimportant.

Of this local taxation rather less than one-half is expended in the relief of the poor. The amount of this tax is, unfortunately, increasing with great rapidity. It is not, I think, difficult to discover the economical causes which give rise to this unsatisfactory phenomenon, but they are out of place in the present paper. It is sufficient to say that between the years 1865 and 1868, the rise in the poor rate proper is nearly 17 per cent., and that a similar increase has taken place in that portion of the local revenue which is put for the most part into the hands of the magistrates, and who are, as far as any persons can be in this country, irresponsible.

Of the remainder, part is the cost of making and repairing

* Taxation on the traffic of persons and things, tolls, harbour and light dues, are not included. The amount 16,733,000*l*. is levied on the occupation of what is technically called "real property."

roads, of draining towns, and even of preventing land from becoming valueless for human use, of supplying police, water, and light, and a variety of other purposes which are relevant to the enjoyment of property and the safety of society. In the case of some among these, it is a mere abuse of words to call the rate a tax, since it is not infrequently a mere outlay of capital for some common purpose, which can be collected and distributed with greater equity by the machinery of a rate, than it could be by the voluntary expenditure of an intelligent self-interest. As a person who makes and repairs a private road for his own profit or pleasure, pays for the advantage from his own resources, so he does, or should, contribute to the cost of a public road in proportion as he is interested at least in the former of these ends. Whether, in fact, all charges needed for these forms of beneficial outlay are derived from the contributions of those who receive the benefit, is a question. But I shall attempt to deal with this question further on.

There is no portion of political economy which is more difficult to expound than the incidence of certain taxes. On the other hand, nothing is more easy and obvious than the incidence of others. For example, a tax on legacies falls, beyond shadow of doubt, on a legatee, and on no one else. So again, a tax on ground-rents will certainly fall on the owner of that portion of the soil which the necessities of society abstract from agriculture. A land tax, *i.e.*, a tax on rents or on that portion of income which, in the case of a person who is simultaneously owner and occupier, represents interest on the purchase of land, or, to be more accurate, on the *present selling value of land*, falls with equal certainty on the landowner. And, similarly, a tax levied on any source of income which is spontaneous, by which I mean which is derived by the operation of economical laws in consideration of the use of some object of value, this object being limited in quantity, will fall on the possessor of that object. This rule applies directly and obviously to a tax on land. It would apply equally to a tax on dividends from the public funds, if it be assumed that these funds are a fixed quantity. If we further assume that the demand for investment in these funds is constant, a diminution in the quantity of the fund would tend to the disadvantage of the person who purchases them, because, in addition to the tax, he would have to bear the loss of higher prices for his security; while an increase in the quantity would be advantageous to him, and might enable such a purchaser to recover his tax by cheapening the security which he purchases.

Thus much, however, may be laid down respecting the incidence of taxation. Taxes levied equally on profits, tend to remain with those who receive profits, and have been generally held to affect

such persons and such persons only, since it is believed they cannot be shifted to others. Taxes which are levied on rents, and paid by the recipients of rents, cannot be transferred by any act of the receiver of rents to others. Taxes levied on consumption are paid, as a rule, by those who consume products, though they may be in part transferred to the producer, by reason of diminished use on the part of the consumer. Taxes on occupancy, when the tax is not part of the cost incurred in carrying out any industry, tend, like taxes on profit and rent, to remain on the occupier.

Land possesses the characteristics of being a fixed quantity, the demand for which is constant, and as the industrial forces of society increase, which increases in value, because it may be made the means for developing new industries, and for increasing the productiveness of old ones. For example, geological and chemical discoveries may make an iron field, which was previously unproductive, enormously valuable; and, similarly, the improvement of the art of agriculture may add fertility, previously unknown, to the soil which is occupied for such purposes. Fifty years ago the South Wales coal and iron fields were comparatively valueless. At the same date English agriculture did not return much more than half its present produce. Now a tax on the rent of such coal fields and such agricultural land, would fall beyond doubt on the person who receives the rent of such land, and might be extended so as to absorb all rent, without in the least degree diminishing the profits of capital and the wages of labour. Hence, if all the local taxation levied in this country were put directly on rent, if the landowner or possessor of ground-rent were visited by the tax collector, or the occupier were legally enabled to deduct these taxes from his rent, as he deducts his landlord's income tax, real property would incontestably bear the burden which, as I shall attempt to show, it is erroneously supposed to bear now.

There is, however, one fundamental rule in all taxation, which it is necessary to premise before it is possible to analyse the incidence of taxation. A person who cannot save cannot, whatever be the attitude which he occupies, be made liable to a tax. He may possess and occupy a portion of the most fertile soil conceivable, and he may exercise the highest skill upon it, but unless the earnings of his labour exceed the cost of his maintenance, he can contribute nothing to the exchequer. He may exhibit the highest art in some costly product of industry, but unless the earnings of his labour exceed the charges of his labour, he cannot be taxed. It is very difficult to tax a Hindoo ryot, and I presume it is equally difficult to tax the peasant manufacturer of a cashmere shawl. Mr. Mill has said that it is not expedient to tax savings. I answer that, with the exception of legacies, it is impossible to tax anything

else. And what applies to a tax applies to rent, which is, in fact, nothing but a tax leviable by the operation of natural causes.

This rent will be payable partly in consideration of the demand which the owner of the soil can put on the necessities of those who must inhabit a particular locality, partly in consideration of the profit which may be made from any industry for the exercise of which the occupation of land is an antecedent condition. The fact that so much is paid annually out of the profits of industry in the metropolis in the form of local taxation, does not determine the ground-rent of a site in an important London thoroughfare, to any greater extent than it determines the rate of discount on commercial bills. It does not follow if every penny of taxation, local and imperial, which is levied on the occupiers in London were remitted, that the value of ground-rents would rise. It does not follow if 50 per cent. of local taxation were added to the existing burdens of the metropolis, that the price of ground-rents would fall.] It does not follow if the whole of the local taxation now paid by the occupier were paid by the owner of the soil, that the price of ground-rents would be notably enhanced. If on a particular site the tax was remitted, that site would, no doubt, become more valuable, but if the tax were universally distributed, and distributed rateably, its universal imposition or its universal remission need not disturb the market value of such sites. The fact is, the rent of land is determined by one set of causes, the incidence of taxation by another set.

In general, however, it is assumed that a tax on occupancy is a tax indirectly paid by the owner of the locality occupied, that local taxation is a burden on land or real property, and that though the tax is seemingly paid by the tenant, it is really paid by the landowner. Thus I see that my friend Mr. Parry says, in the paper to which I have already referred, that "in the British fiscal system, "real property suffers an exceptional liability to taxation." Sir George Lewis "has no doubt that local rates fall on the owner." Mr. Dudley Baxter is of opinion "that three-fourths of these rates "do." If this be true, there is an obvious propriety in giving legal power to the tenant to deduct his local taxes from the rent he pays in all cases, and in leaving him to make a fresh arrangement with his landlord under these altered circumstances. I very much doubt whether the landowners would quietly acquiesce in this arrangement. However much they may assert and believe that local taxation is a burden on real property, they would not, I think be gratified at the prospect of such a change in the method of collection.

The idea that such taxes as are collected on a valuation of property, are really a tax on the owners of such property, and are only temporarily paid by the occupiers, is as old as the science of poli-

tical economy. It was entertained, as we learn from Adam Smith, by those Economists whom he lauds so highly. "All taxes, they "pretend," says the philosopher, "fall ultimately on the rent of "land, and ought, therefore, to be imposed equally on the fund "which must finally pay them." Of course this theory carries with it its own refutation. Unless the transference of all taxation to the rent of land were followed immediately by a prodigious increase of all rents, it is manifest that they who do not own land really pay taxes, for the taxation of this country, imperial and local, is more than double the rental under Schedule B, and not much less than the rateable value of all property which is assessed for the relief of the poor.

The use of the words "real property" is wholly arbitrary. In the days when the distinction between it and personal estate was first made, that item of real property which consists of buildings was too unimportant and of too little value to claim a separate title. But, of course, at present, a house is an investment of fixed capital, and is analogous to any other kind of similar investment, as for example, machinery. The rent of a house, when the ground is distinguished from the building rent, is merely interest on capital, and ought to be put in the same classification. And it may be here observed, that at the time when the distinction was made, personal was much more valuable than real estate.

Separating, then, the rent of the building from that of the site, the person who occupies a site for his dwelling and business, or who rents land for agricultural purposes, does so in the impression that the profit which he makes on his calling will enable him to pay the rent for which he contracts. The pressure of a local tax affects him in just the same way that an imperial tax does. Take it off, and it does not follow that his rent will rise. Increase it, and it does not follow that his rent will fall. In what way will an additional 6*d.* in the pound of poor rate, equally distributed, affect house rent more than an additional 2*d.* in the pound income tax? Does anybody imagine that rents will rise because half the sugar duties are remitted? It is true that the tax, local or imperial, may be so excessive as to trench seriously on occupier's profits, *i.e.*, to diminish his savings or his enjoyments, but as long as the tax is levied all round and levied equally, it will not be transferred from the person who pays it to any one else, and if it be levied unequally, the only portion of the tax on which the landowner can, so to speak, operate with a view to raising his rent, or must consider under certain circumstances, and thereby suffer a fall, is that part which is less or more than the average.

People, in treating this question, are constantly influenced by the fact, that when a house or farm is let, the question, What are the

rates ? is always put. But this question does not refer to average, but to exceptional rates, is relevant to the person's power of renting, not to the fact of his paying the rates. The pressure of average rates may perhaps constrain persons who get or anticipate a definite amount of profits or wages, to occupy a less convenient house than they otherwise would, and so, as far as the better class of houses go, lower their value, while they enhance that of inferior accommodation by competition. Similarly, though in less degree, the pressure of average rates may not lower the rent of farms, since, unless *the rate is all loss to the farmer*, that surplus of value over and above cost, from which rent arises, may be available under the pressure of competition for an increase in the rate of rent. But it will be diminished only under the condition to which I have referred, that the rate is loss, for rents will fall only because the rate of agricultural profit is lower than that at which, *ceteris paribus*, capital could be employed in other industrial occupations. I shall take occasion hereafter to show that agricultural rates are for the most part anything but loss.

Here, too, I may observe, that apart from those conditions which render the transference of an average quantity of taxation on occupancy from the occupier to the landowner a matter of difficulty if not of impossibility, the latter is put in possession of another power which he can use against the occupier. As a rule, the determination of an occupancy is always a greater loss to the occupier than it can be to the owner. In shops the owner can exact a higher price for the holding, because the occupier has made the business site valuable; and, I may add, he often does so. In houses, the transference of furniture, &c., from one place to another, constantly entails loss very much in excess of any ordinary increase of local rates. Nor can a farmer, however skilful, intelligent, and wary he be, extricate his capital from his holding without a mulct. These facts appear in Ireland under an exaggerated form, and have, beyond question, developed and intensified that claim for an occupancy right which is probably destined to have a legal sanction ere long. They are not less real in Great Britain, and may hereafter create a similar clamour for protection and compensation. Now, if the attitude in which a tenant stands to his landlord in respect of the enhancement of rent is of this character, still more certain is it that the situation is likely to force him into the endurance of that increase of local taxation which is supposed, but erroneously, to necessarily fall on real estate, and which, if local taxation were raised by a uniform and national rate, would be found to fall exclusively on the occupier, or at least to affect the owner only in so far as it disables the occupier for competing for a better site. I do not of course forget that the local taxation levied on the agriculturist will be shared by

the landowner in so far as the tax is a loss, and as it diminishes his rate of profit below the average obtained in other analogous callings. But I have already given this caution.

I am, therefore, led to the following conclusions. That in the ordinary class of occupations, that is, of houses, rates are paid virtually by the occupier and not by the owner, just as a house-tax is. That they do not in these cases constitute any burden on real estate, but are a burden on industry. That the owner is enabled, partly by the increasing competition for occupations, and partly by the power he has of inflicting loss by determining occupancy, to force the payment of increased rates on the occupier. That in case the pressure of local taxation constrains the occupier to content himself with inferior accommodation, the competition price of the poorer class of habitations is enhanced. That the only colour for the impression that local taxation is paid by real estate lies in the fact, that an excess of local taxation over the average lowers rent, and a diminution heightens it. That if a uniform rate of local taxation was instituted over the country, *i.e.*, if the poor and other rates were national and on a national assessment, the same amount in the pound on all occupancy being enacted from all occupiers, local taxation would be found to conform in all particulars of incidence to imperial.

I am now, however, led to consider local taxation as levied on occupiers of agricultural land. Here, at first sight, the power of transferring the tax from the occupier to the owner seems much more obvious, for land is here used as an instrument of profit, and the inequality of rates is more apparent. But the transference is more superficial than real. In so far as local taxation diminishes the profit of the occupier in towns, it is, under the law that the tendency of profits is to an equality, equally endured by the farmer. In so far as local taxation in his case is no loss, but an economy, he does not properly pay a tax. In so far as he can thrust a portion of this taxation on others, he does not pay it. He does not, to be sure, profit by it, since for the obvious and natural reasons that profits tend to an equality, both economy and transference appear in the increase of the landowner's rent.

The heaviest item in a farmer's local taxation is the poor rate. Economically considered, a poor rate is an insurance of the labourer's life and health. It does for him what those who are above the condition of pauperism do for themselves, maintains him in childhood and old age, assists him in sickness, protects him when labouring under mental disease, and supplies him with the services of a highly-skilled person in the shape of a medical officer. Now it is plain that, at the existing rate of agricultural wages, the farm labourer, and to some extent the artisan, could hardly supply

these services for himself. Cut away poor law relief, and one of two things must happen. Either the labourer must be better paid, that is, the cost of his labour must be enhanced, or a considerable number of those who are habitually maintained by the poor rate must perish. A poor rate, then, is a rate in aid of wages, under which wages are supplemented, and, therefore, the prime cost of labour is diminished. The poor rate, then, is not wholly loss. It cheapens labour, and so increases rent. Take it away, and a considerable portion of that which the landowners might receive in the shape of an increased rent, due to a diminished outlay for the maintenance of the poor, would be re-assumed by the farmer in consequence of the exalted cost at which labour would be procurable. It is a notorious fact, that where wages are low, poor rates are high, and, I may add, rents very slowly progressive.

Now I am ready to admit that some portion of poor rate expenditure is sheer loss. It appears to be so in the case of infirm paupers. It is so in that of lunatics. In the former case, it is true, from my hypothesis, which cannot, I think, be gainsayed, that the maintenance in old age is a part compensation for cheap labour in youth, just as the maintenance of pauper children is a guarantee of cheap labour hereafter. Of this, at least, I am sure; if the poor rates were abolished to-morrow, and the existing disabled or infant poor left to starve or be supported by voluntary effort, the enhancement in the cost of wages would very speedily equal the amount now levied for the relief of the poor.

The farmer, then, employs labour beneficially, that is, with a view to profit. His profit, for economical reasons, is shared by the landowner. In order to do this to the best advantage, he insures the labourer's life and health, and he gets him cheaply by the process.

But he only pays a portion of the insurance. They who do not employ labour beneficially, who could not obtain the reduction of a farthing per cent. in the price of farm produce if the wages of labour were reduced to one-half their present average, and were supplemented by the poor rate, under an allowance system, contribute largely to the insurance fund of which I speak. The occupiers of houses whose callings or professions do not add 1 per cent. to pauperism, pay more than half the charge. I make no doubt that the landowner gains a vast increase to his rent by the fact that the poor rate is levied on all occupiers, while the profit of cheap labour is to the ultimate benefit of the landowners only. The poor rate in country towns is, in fact, a house-tax, levied to a very large extent for the advantage of landlords, who obtain the boon in the shape of cheap labour in agriculture.

I never have been able to find a case made out against the poor

rate from the point of view that it falls on a special class, except in the fact that it is mulcted of a small sum for registration. But as the towns pay poor rates as well as the rural districts, and pay as a rule for hosts of agricultural labourers within them; as their contribution is high and the registration costs are small, I do not think that any very serious loss would accrue to the nation, or any great gain to the landowners, if the costs of registration were paid out of the consolidated fund.

Next in character, and still more markedly a beneficial outlay, is the cost for making and repairing roads. The aggregate charge for this purpose appears to be over 1,400,000*l.*, the principal items being the highway rates, levied under Acts of 1862 and 1864, and that under 27 and 28 Vict. (See Table E, Appendix.) These are supplemented by rather more than 900,000*l.* raised by tolls (Tables O and P Appendix).

Now, a road is as essential to the carriage of agricultural produce as a waggon and horses are, and a good road is as advantageous to the landowner as a well-built waggon and well-fed horses are superior to a rickety waggon and a starved team. To reckon the cost of making and repairing roads as part of the burdens on land, is as preposterous as it would be to calculate draining tiles and farm buildings as a peculiar impost. Roads are an essential of production and exchange, and while they are a convenience to every one, they are an absolute necessity to the farmer; while good roads are a far greater economy to the man who has to carry heavy produce, than they are to those whose use of the road is voluntary, and whose wear of the road is slight. But it is hardly necessary to insist on this.

In general,—the exceptions are very rare,—the inhabitants of towns keep their own roads in repair. For example, in the city in which I live, the ratepayers keep twenty-seven miles in repair, a quantity which equals all the roads entering into the town for about four miles round. In other words we confer on those who use our roads for the whole distance which they traverse, a free way. But the case is very different when we who abide in the town make use of the country roads. They bristle with toll-gates (there are eight such in the area referred to), generally placed in such situations as to catch town traffic, which is ordinarily of a very light description, while the parts of the road intermediate to the toll-gates are constantly used without charge, for the conveyance of farm-yard manure and timber, operations carried on at the time when such heavy carriage is more than ordinarily destructive to the roads. I do not deny that when a particular parish is intersected by many and costly roads, that the levy of a rate for the complete repair of these roads might be a wrong to such a parish.

This, indeed, may be remedied by extending the rateable area so as to effect an equitable distribution; but I am quite certain that a very notable amount of the costs and charges of keeping many roads, chiefly used for agricultural and similar purposes, in repair, falls far more heavily on the inhabitants of towns than it does on those who live in country places, and that, in fact, so far are highway rates from being a burden on land, they are a necessary part of the process of agriculture, some of the costs of which are thrust on those to whom the road is only indirectly a necessity, and never a source of profit.

Carrying out the principle that taxes levied on occupiers are generally paid by occupiers, it is true indeed that county rates levied for the purposes of police and justice are a burden and a loss. They must be endured, indeed, and they are endured with tolerable patience by the class which really pays them. Now and then remonstrances are heard that the county police are to a considerable extent occupied as gamekeepers, and that in all likelihood the excessive provision for a peculiar amusement is a direct stimulant to crime. I remember some time ago to have heard an instance—and it is probably no rare one—in which the demand for the material of battue shooting was calling into existence a class of men who “collected,” or, as Pistol says, “conveyed” live pheasants on a large scale to those places where shooting by wholesale is carried on. These people are looked after, how efficiently I don’t know, by the rural and town police.

It is not easy to find words which, without giving offence, will characterise that piece of legislation which constrained the occupier to pay for the losses of the cattle plague. In common equity, the rate should have been levied on those whose cattle survived, and whose stock was vastly increased in value by the losses of others, as well as protected by the machinery adopted under the Act. As it was, the loss was paid by the occupier, who was mulcted twice, once by the scarcity of the animal visited by the murrain, secondly, by the incidence of that remarkable, and let us hope unique, act of parliamentary taxation.

The remainder of local taxation is chiefly levied in towns. Lighting, paving, sewer, and police rates, are paid by the occupier, and ought to be so paid. They are part of the general machinery by which industry is carried on and protected. A landowner no more pays the lighting and police rate of the town in which his property is situate, unless he occupies the property himself, than he pays for the gas which the occupier burns in his shop or dining-room, or for the service he hires in his counting or dwelling-house, unless indeed we are to hold with the French Economists, that every tax is a landlord’s loss.

It is not rarely, however, the case, that certain local rates, levied for permanent improvements, and distributed over a term of years, are paid by the tenant against himself, since the investment of his taxes forms a fund by which rents may be raised hereafter. Thus, for example, the occupiers of the city of Oxford are invited to expend a large sum (it has been calculated at 100,000*l.*) on the permanent draining of the city. As seven-tenths of the land within the municipal borough belongs to corporations, and as the tax, if it be imposed, will assuredly be levied on the occupiers, the greater part of this outlay will ultimately be handed over, at the cost of the ratepayers, to those splendid inutilities, the Oxford colleges, in just the same way as if a farmer were constrained, at his own cost, to drain his landlord's land, he would, under the operation of that system of "free contracts," which is said to be characteristic of English tenancies, ultimately pay rent on his own outlay. The same city has latterly built a gigantic workhouse, for which, of course, the ratepayers have to find the money, while the principal owners of ground-rents pay absolutely nothing, and find the price of their property exalted.

No reason has yet been alleged which will countenance the fancy that local taxation is not a burden on industry, but is a burden on real estate. The rent of agricultural land is settled by the cost of agricultural produce, corrected by the demand for such produce, rent being the difference between the cost of the produce, plus the farmer's profit, and the value of the produce. The rent of houses is determined by the competition for sites, and by the rate of profit on a building investment. Local taxation, great or small, has nothing to do with the rents, except in so far as it causes unequal profits. Nay, it is even possible that the increase of local taxation may heighten rents, by forcing a sharper competition for the means of life, by constraining a longer and more arduous attention to business, and by making the tenant more immovable, and therefore more in the power of one of the parties who is able to effect what is called a free contract. And, in brief, if it be the case that local taxation is a burden on real estate, the fairest, the safest, and the most economical means by which the tax could be collected, would be to empower the tenant—as in the case of income tax—to deduct—any contract to the contrary being void—his payments from his rent.

Almost every fallacy in practice has a basis of truth, and the facts which lie at the bottom of this delusion, that a local tax is a tax on real property, are the truths that the successful cultivation of the soil is the measure of population and all other industry; that all industry needs a *locus standi*, which, as land is appropriated, must be paid for, and that whatever value may be induced

by industry on material objects, those objects are, directly or indirectly, obtained from the soil. Hence, whatever can be enjoyed must be obtained from the natural fertility of the earth, or under a licence to practise the industry by which value is added to natural products. Now it is plain that to diminish a man's power of expenditure by taxation is to diminish his power of purchasing those products; to increase his power is to increase his purchases. But he may purchase what is produced in foreign countries, and so enhance the value of land in those regions; and even if his purchases under this extended power were limited to his own country, imperial taxation would have just the same effect on him that local has.

The idea, however, that local taxation presses severely on real estate has led to the concession of certain compensations, which, being partial in their grant, are a real benefit to landowners. I will not refer to past legislation, the purpose of which was sufficiently notorious, but simply comment on existing exemptions. To take the former would be to travel over the whole of legislation from the days of the first labour law, and the first corn law, down to the equalisation of the fire insurance duty by its total abolition. Nor do I refer to the contrast between the direct taxation levied on land in this country and that which holds in other civilised communities, where the rent of land is made to contribute largely to public burdens, and to contribute immediately to them. In England, the land tax, instead of having its proportion to rent determined in accordance with the principle of its first imposition, has been stationary for a century and three quarters, the assessment never having been revised.

The most notable among the concessions made to the possessor of real estate devised as realty, is the exemption of his estate from probate duty, its estimate for succession tax on principles totally distinct from those which govern the devise of personal estate, and thereby its signally gentle usage from the tax gatherer as compared with that accorded to personal estate, and the delay allowed to those who have to pay this reduced quota from real estate. I have no means of estimating what the value of the difference is, or what would be the gain to the exchequer if realty were taxed at the same rate as personalty. But there is, I believe, no defence for this difference, except it be the statement studiously circulated, and, I make no doubt, honestly believed, that local taxation is a burden on real property.

Another singular advantage which is possessed by the landowner, is the power of obtaining advances from Government for the permanent improvement of his estate. What the amount of this gratuity is (for as it is obtained at lower rates than it could be

had in the open market, it is a gratuity) I am not able to discover. But I have been told by those who have taken advantage of these grants, that landowners are constantly able by the instant rise in the rent of such land as has been improved, to repay principal and interest without the cost of a single penny to themselves. I know no better reason for those loans than could be given for an advance to persons who build houses, or for advances of Government paper on the security of stocks in times of panic, or a contracted money market, to a merchant.

The custom of primogeniture, and the power of strict settlement, are indirectly to the advantage of landowners, because they restrict the operation of these natural causes which could bring land into the market, and so effect a monopoly price for occupation. This limitation on alienation, which needs a defence in every kind of property, needs a still stronger defence in the case of land, the quantity of which is strictly limited, and the use of which is absolutely necessary.

Under the influence, I imagine, of the same delusion, that "real estate" is exceptionally burdened, the rent of the landlord is, by the English law of distress and the Scotch of hypothec, made a secured debt against other creditors. To comment on the injustice of this provision of law would occupy too much time; but it may be said that there is no evidence that this custom is of any benefit to the tenant, but there is abundant evidence that it is a flagrant wrong to other creditors, and not infrequently to innocent parties, whose property is in danger of confiscation in order to satisfy the landlord's claim in full.

It is alleged that the conveyance of land is surrounded with intolerable expenses. One of these expenses is a tax on deeds of conveyance. Unless I am misinformed, the same tax is levied on transfers of railway and similar stock. But the greater part of these expenses is due to sheer vanity, to the desire on the part of landowners to create, as far as possible, a perpetual estate, and to the preposterous rules of law maintained in the interests of landowners, which constrain an innocent purchaser to suffer a total loss if his title turns out bad, and which extends the right of action for real estate beyond all reasonable limits. No small portion too of these charges is due to the persistence with which landowners resist the general registration of deeds, no doubt in order to prevent the public from knowing how small an amount of the income of real estate remains to the nominal owner when the claims of mortgagees are satisfied.

There are certain other exemptions which, affecting the costs of agriculture favourably, enure, according to the provisions which have been already laid down, to the possessor of landed estate. Of

those which still remain, one of the most notable is the exemption of horses employed in farm labour from duty or licence. A duty on horses is, I think, a bad tax, but why a brewer's, or carrier's, or stable keeper's, should be made liable to tax, and a farmer's should not be liable, is unintelligible to me. The exemption cannot be based on principles of equity; but it must have been conceded, either from some obscure conceptions as to the paramount utility of agriculture, and therefore an obligation that it should be encouraged, or from the idea that land is liable to peculiar burdens.

Mr. Dudley Baxter objects that the land tax, the most real of these burdens, has been described by some economists, and particularly by Mr. Mill, as a rent-charge rather than a tax. Now the only difference between a rent and a tax consists in the fact, that the former is the result of a natural, the latter of municipal, law. But a fixed charge on rent, based on an ancient and unchanged assessment, is nothing but a small payment of the natural increase which has raised the present rent of land ten times since the land tax was first imposed. Antiquity of title will not in itself vary the nature of an impost, and a tithe rent-charge is as much a tax as a land tax is. What, however, induces persons to use a different set of phrases about these deductions from rent, from those which they would employ about an income tax, is, that they are really a partition of rent between landowner, State, and tithe owner, with this difference, that the landowner's advantage increases, while that of the other two is stationary.

The general conclusion, therefore, which I gather from the survey of this subject, is, that a large portion of so-called local taxation is beneficial outlay, and in strictness should no more be called a tax, than the appliances of business are a tax on the trader; that as long as the tax is levied on the occupier, and is distributed evenly, the occupier pays it and not the owner: that in a great number of cases, this distribution of local taxation is a solid advantage to the landowner, who gets paid a part of the necessary charges which are incurred before his rent is possible out of the pockets of other people, and that the presumed incidence of local taxation, for the reality of which no proof has been given, has been made the apology for a series of enactments, many of which have been exceedingly injurious to the mass of the people, none of which can be justified on economical grounds, all of which are, as the real state of the case is discussed and comprehended, indefensible, and therefore in danger.

Subjoined are the particulars of "local taxation" incident upon rateable areas, and on the traffic of turnpike roads, in England and Wales, so far as the statistics can be collected, for the years 1864-69 inclusive.

APPENDIX.

A.—POOR RATES *Levied and Expended, Six Years, ended with 1869.*

[000's omitted throughout, i.e., A to F, thus 9,448l. = 9,448,000l.]

Years ended at Lady-day.	Amount of Poor Rates Levied.*	Expended in Relief to the Poor.	Expended for all other Purposes.	Total Amount Expended.
	£	£	£	£
1864	9,448,	6,423,	3,257,	9,680,
'65	9,392,	6,265,	3,527,	9,792,
'66	9,574,	6,440,	3,550,	9,989,
'67	10,304,	6,960,	3,946,	10,906,
'68	11,055,	7,498,	3,883,	11,881,
'69	11,364,	7,673,	4,101,	11,774,

* Besides the rates actually levied each year, there is a considerable sum of "receipts in aid." In 1869 they amounted to 412,000l.

B.—COUNTY, BOROUGH, POLICE, and HIGHWAY RATES *Paid out of Poor Rates, Six Years, ended with 1869.*

Years ended at Lady-day.	Amount Paid Out of the Poor Rates to other Local Rates.		
	County, Borough, or Police Rates.	Highway Boards under 27 and 28 Vict., cap. 101.	Total.
	£	£	£
1864	2,163,	—	2,163,
'65	2,133,	551,	2,684,
'66	2,209,	578,	2,788,
'67	2,512,	596,	3,107,
'68	2,457,	615,	3,071,
'69	2,565,	658,	3,223,

C.—*Payments to the COUNTY and POLICE RATES, chiefly out of Poor Rates, Six Years, ended with 1868.*

Years ended Michaelmas.	Levied on County and Police Rates.	Allowance from Her Majesty's Treasury.	Other Receipts.	Total Money actually Received.
	£	£	£	£
1864	1,305,	326,	308,	1,935,
'65	1,291,	349,	317,	1,956,
'66	1,359,	329,	371,*	2,059,
'67	1,449,	329,	513,	2,290,
'68	1,501,	343,	450,	2,294,
'69	1,576,	352,	578,	2,506,

* Exclusive of 368,000l. raised in 1866 as "Cattle Diseases Prevention Act Rate."

Note.—In a few parishes a separate rate is raised for county and police purposes.

D.—BOROUGH RATES, TOLLS, and other RECEIPTS, during 1852-54 and 1868 (*exclusive of the City of London*).

Years ended August.	Total Receipts of Boroughs.	Whereof were Raised as Borough Rates.*	Total Borough Expenditure.
	£	£	£
1852	1,417,	329,	1,306,
'53	1,465,	268,	1,456,
'54	1,469,	312,	1,497,
'68	2,157,	997,†	3,077,

* A part of these rates is paid out of poor rates.

† Of this sum 543,000*l.* are borough rates under 5 and 6 Wm. IV, cap. 76, and 454,000*l.* "other rates" levied by the boroughs.

E.—HIGHWAY RATES *Raised under the Highway Acts of 1862 and 1864, Five Years ended with 1867.*

	Highway Rates.	Other Receipts.	Total.
	£	£	£
1863	1,268,	87,	1,355,
'64	1,234,	70,	1,304,
'65	1,340,	68,	1,403,
'66	1,345,	67,	1,412,
'67-68	1,428,	68,	1,496,

Note.—These are raised as separate rates. In 1867-68 the levy under 12 and 13 Vict., cap. 12, was 643,000*l.*; under 23 and 24 Vict., cap. 68, 45,000*l.*; and under 27 and 28 Vict., cap. 101, 740,000*l.*

F.—RATES, TAXES, TOLLS, and DUES *Raised by Improvement Commissioners, Five Years, ended with 1868.*

	Improvement Rates, Taxes, Tolls, or Dues.	Other Receipts.*	Total.
	£	£	£
1864	333,	105,	438,
'65	325,	136,	460,
'66	349,	199,	548,
'67	680,	365,	1,045,
'68	699,	349,	1,048,

* Excluding loans.

G.—LOCAL GOVERNMENT RATES, *Five Years, ended 1868.*

	District Rates.	Highway Rate.	Other Rates and Receipts.	Total.
	£	£	£	£
1864	249,	31,	148,	428,
'65	293,	34,	166,	493,
'66	249,	36,	110,	394,
'67	671,	66,	296,	1,033,*
'68	840,	83,	358,	1,281,

* This is not the total in the book ; though taken from a balanced account it is demonstrable that the receipts are between 20,000*l.* and 30,000*l.* wrong.

H.—METROPOLITAN, VESTRY, and DISTRICT BOARD RATES. *Sums Levied for the undermentioned Rates, Five Years, ended with 1868.*

PART I.

	General Rates and Lighting Rates.	Special Rates.	Total.
	£	£	£
1864	668,	34,	702,
'65	679,	40,	719,
'66	736,	27,	763,
'67	868,	36,	904,
'68	957,	31,	988,

H.—METROPOLITAN, VESTRY, and DISTRICT BOARD RATES—*Contd.*

PART II.

	Sewers Rates.	Main Drainage Rate.	Total.
	£	£	£
1864	149,	151,	300,
'65	206,	150,	356,
'66	182,	179,	361,
'67	245,	193,	438,
'68	292,	169,	461,

I.—METROPOLITAN POLICE RATE (*Paid Out of Poor Rates*) and GOVERNMENT GRANTS, *Four Years, ended with 1870.*

Years.	Rates Paid by the Parishes.	Government Grants.	Total.
	£	£	£
1866	383,	140,	523,
'67	448,*	147,	596,
'68-69	489,	172,	661,
'69-70	534,	175,	720,

* This police account was made up for five quarters, four-fifths of the totals are entered above.

J.—WARD RATE and CONSOLIDATED RATE of the City of London. Sums Levied, Five Years, ended with 1868.

	Ward Rate.	Total Receipts under Consolidated Rate.	Whereof were for	
			Consolidated Rate alone.	Improvements.
	£	£	£	£
1864	4,	122,	97,	14,
'65	3,	113,	92,	9,
'66	4,	136,	109,	16,
'67	3,	153,	111,	31,
'68	5,	141,	104,	37,

K.—POLICE RATE of the City of London. Sums Levied within the City, Five Years, ended with 1868.

	Police Rate.	Corporation Grants.	Other Receipts.	Total.
	£	£	£	£
1864	37,	11,	3,	52,
'65	31,	13,	3,	47,
'66	44,	17,	4,	65,
'67	48,	15,	4,	67,
'68	51,	15,	6,	72,

L.—SEWERS RATE. Sums Levied, Five Years, ended with 1868.

	Sewers Rate.		
	In Counties.	In City of London.	Total.
	£	£	£
1864	44,	17,	61,
'65	42,	18,	60,
'66	41,	18,	59,
'67	43,	40,	83,
'68	45,	25,	70,

M.—DRAINAGE and EMBANKMENT RATES and RENTS, Five Years, ended with 1868.

	Total Receipts.	Whereof was from	
		Rates under Act.	Rents, Rates, by Charter or Custom.
	£	£	£
1864	216,	140,	7,
'65	165,	135,	3,
'66	161,	131,	11,
'67	199,	162,	14,
'68	230,	141,	13,

N.—CHURCH RATES. *Sums Levied, Five Years, ended with 1868.*

	Total Receipts.	Whereof were Church Rates.	
		At Common Law.	Under Statute Law.
	£	£	£
1864	300,	208,	34,
'65	296,	210,	33,
'66	280,	194,	35,
'67	290,	202,	31,
'68	339,	195,	35,

O.—TURNPIKE TOLLS. *Amount Raised in England and North Wales, Five Years, 1861, 1864-67.*

	Tolls.	Parish Aid.	Total.
	£	£	£
1861	1,039,	31,	1,070,
'64	1,009,	31,	1,040,
'65	998,	32,	1,030,
'66	945,	31,	977,
'67	890,	33,	923,

P.—TURNPIKE TOLLS. *SOUTH WALES Roads, Five Years, 1861, 1864-67.*

	Tolls.	County Road Rates.	Total.
	£	£	£
1861	27,	10,	37,
'64	28,	9,	37,
'65	28,	8,	36,
'66	25,	10,	35,
'67	25,	10,	34,

SUMMARY Statement of the Local Rates Raised from Rateable Areas in England and Wales during the Latest Year for which particulars are published.

	Year.	£
A.—Poor rates (<i>minus</i> borough, county, police, } and highway rates)	1869	8,142,000
C.—County and police rates	'69	1,576,000
D.—Borough rates	'68	997,000
E.—Highway „	'68	1,428,000
F.—Improvement commission rates	'68	699,000
G.—Local government rates	'68	923,000
H.—Metropolitan, vestry, and district board rates	'68	1,449,000
J.—City of London consolidated and ward rates...	'68	109,000
K.—City police rates	'68	51,000
L.—Sewers' rates	'68	70,000
M.—Drainage and embankment rates.....	'68	154,000
N.—Church rates	'68	230,000
Total	—	15,828,000

Note.—The aggregate amount of this summary falls short of the sum given in Mr. Ward Hunt's return of 1868. After a very careful investigation of the local taxation returns for several years, no other information with regard to the levy of separate rates of this class, than particulars corresponding to those given above, can be discovered.—[ED. S. J.]

MISCELLANEA.

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I.—Income Tax Variations.

FROM the *Pall Mall Gazette* :—

“ In order to replenish a failing exchequer and remove the fetters which weighed upon British commerce in his day, Sir Robert Peel proposed and carried an income tax. It was passed for three years; it has survived for nearly a generation. At every emergency it has adapted itself to the national wants with unfailing elasticity. From the nature of things no tax can be really called popular: but this, on the whole, has been borne by the payers at least with considerable fortitude. It has had its enemies, and a host of doctors, each with his own specific, yet it endures. It has undergone the attacks of witnesses examined before select committees of the Commons during the sessions of 1851, 1852, and 1861. The opinions brought out under these examinations were very conflicting, and some mutually destructive.

“ The Select Committee of 1851-52, considered a scheme propounded by Mr. Hume for the conversion of the income and property tax ‘into a tax to be adjusted in accordance with—1. The value of property; 2. The tenure of the owner; 3. The age of the owner.’ The Inland Revenue Department, to whom this scheme was communicated, ‘expressed a strong opinion that its administration would be attended with insurmountable difficulties.’

“ The Committee of 1861 was presided over by Mr. Hubbard, who submitted three proposals, ‘addressed,’ as the committee reported, ‘to three complaints which are popularly made against the income tax in its present form, viz., that it taxes the owners of property in respect of income which they do not get; that it presses too hardly upon skill and industry as compared with property; and that it deals with capital in certain cases as if it were income, and taxes it accordingly.’ Upon this the committee observe :—‘This tax having now been made the subject of investigation before two committees, and no proposal for its amendment having been found satisfactory, your committee are brought to the

conclusion that the objections which are urged against it are objections to its nature and essence rather than to the particular shape which has been given to it.' So nothing was done.

"It may be as well to explain, with regard to the following statistics, that the term 'net receipts' means the sum actually taken out of the taxpayers' pockets; and that the 'financial year' terminates with March—the mode of expressing this by the Inland Revenue Office is to the unwary rather misleading, for example, 1844 meaning nine months of 1844 and three months of 1845, and so on.

"For the sums entered in Sir Robert Peel's budgets of 1842-45, the tax was fixed at 7*d.* in the pound on all incomes of 15*s.* and upwards. It was limited in its incidence to Great Britain—to bring Ireland under the new impost was, O'Connell asserted, like 'taxing moonshine.' The first of Peel's income tax budgets, that of 1842-43, estimated the yield for the financial year at 3,700,000*l.*; but in fact only 2,456,000*l.* was obtained. What was actually paid into the treasury *within* the financial year 1842, was only 582,000*l.*; consequently, about two millions of the tax was collected in the following year. We mention this to prevent any confusion between the 'budget' figures of our Chancellors of the Exchequer and the 'financial year' figures of the Inland Revenue reports.

"No change took place with respect to the rate or incidence of the tax for eleven years. Leaving out the sum paid into the exchequer in 1842 as fragmentary, we have a decade terminating with 1852-53, which produced an average yearly revenue of 5,471,000*l.* From this average no individual year widely diverged. This is shown by the subjoined table:—

*Net Receipts from Income and Property Tax in Great Britain only,
Ten Years, 1844-53.*

Financial Years of the First Period.	Annual Receipt in	
	Under Average Years.	Over Average Years.
	£	£
1843-44	5,388,000	—
'44-45	5,330,000	—
'45-46	3,183,000	—
1846-47	—	5,544,000
'47-48	—	5,613,000
'48-49	—	5,485,000
'49-50	—	5,565,000
'50-51	—	5,511,000
1851-52	5,440,000	—
'52-53	—	5,653,000

"With the exception of 1851-52, all the over average sums were paid in the later portion of the term. By investigating the yield of the different schedules, it will be found that the variations

as shown by the duty *assessed*—that is, the gross amount calculated by the Commissioners before the exemptions have been allowed—differ occasionally, as between one schedule and the other, in the same year, one increasing and the others decreasing. We select, as sufficient for the object, Schedule A, real property; Schedule B, farmers' profits; and Schedule D, the profits of trades and professions. During the financial year 1847-48, there was a most severe mercantile crisis. 'Within a few months,' observes Sir Stafford Northcote,* 'no less than 220 mercantile houses of the higher class fell, besides many of inferior importance; the liabilities of eighty-five out of these 220 firms, are estimated to have amounted to 12,000,000*l.*, and the total loss occasioned by the whole of the failures is said to have been 30,000,000*l.*' So far as the Inland Revenue returns were directly injured by this state of things, the results are observable under Schedule D only.

Amount of Duty Assessed under the Three Schedules.

Financial Year.	A.	B.	D.
	£	£	£
1842-43	2,501,000	335,000	1,682,000
'43-44	2,472,000	328,000	1,582,000
'44-45	2,486,000	324,000	1,579,000
'45-46	2,587,000	332,000	1,717,000
1846-47	2,605,000	324,000	1,768,000
'47-48	2,658,000	322,000	1,754,000
'48-49	2,755,000	332,000	1,585,000
'49-50	2,728,000	326,000	1,571,000
'50-51	2,726,000	321,000	1,606,000
1851-52	2,767,000	310,000	1,669,000
'52-53	2,783,000	305,000	1,700,000

"The duty assessed' on trades and professions in 1847-48 was 1,754,000*l.*, in 1848-49 it was 1,585,000*l.*, and in the following year 1,571,000*l.* All this time Schedule A was rising—houses, factories, railroads, were coming into the account—the assessments, taken in order of the four years beginning with 1846-47, were 2,605,000*l.*, 2,658,000*l.*, 2,755,000*l.*, 2,728,000*l.* Farmers' profits, which in 1847-48 were assessed at 322,000*l.*, rose in 1848-49 to 332,000*l.*, but declined a little in 1849-50, when 326,000*l.* was scheduled. Contrasting the last with the first year of the table, it will be found that Schedule D increased 18,000*l.*, Schedule B decreased 30,000*l.*, and Schedule A increased 202,000*l.*

"Unfortunately, the weakest part of the income tax, the assessments to Schedule D, cannot, without resorting to means intolerable to Englishmen, be strengthened. This is the gravest blot in the system. The Commissioners recently remarked that the evasion of the tax under this schedule 'is not confined to any particular class, trade, or profession.' 'We find,' they said, 'the same practice

* "Twenty Years of Financial Policy."

prevailing among legal practitioners when, on the abolition of their exclusive privileges in some particular court, they have to make good their claims to your lordships; we find it on all occasions of large demolition of shops and warehouses for public purposes, and we find it in great companies and in firms whose business is almost a national concern from its magnitude and world-wide reputation.' In a large number of compensation cases, 40 per cent. of the persons assessed had understated their income to such an extent, that a true return would give an addition of 130 per cent. On these data the Commissioners have computed, with respect to the year 1864-65, that revenue was deficient in consequence of evasions under this schedule to the extent of 1,431,000*l.* The first period of the tax was for eleven years, and ended with 1852-53, the second began with 1853-54. During this second period Ireland was brought under the tax, and it was carried down to all incomes of 100*l.*; but a lower rate was applied to incomes of 100*l.* and under 150*l.*, as set out in the table appended:—

Net Receipts from Income and Property Tax in Great Britain and Ireland, Ten Years, 1854-63.

Financial Year of the Second Period.	Annual Receipt.	Rate per Pound on Incomes of	
		£150 and upwards.	£100 and under £150.
	£	s. d.	s. d.
1853-54	5,730,000	— 7	— 5
'54-55	10,922,000	1 2	— 10
'55-56	15,159,000	1 4	— 11½
1856-57	16,051,000	1 4	— 11½
'57-58	11,396,000	— 7	— 5
'58-59	6,610,000	— 5	— 5
'59-60	9,666,000	— 9	— 6½
'60-61	10,957,000	— 10	— 7
1861-62	10,471,000	— 9	— 6
'62-63	10,483,000	— 9	— 6

"We have spoken of the tax as one of unfailing elasticity, and we need only point to these figures in justification of that expression. In 1854-55 we raised by it almost twice as much as in the previous year; 1855-56 and 1856-57 were each about 50 per cent. above 1854-55. These years, with the following one, were war years; the screw was turned upon the taxpayer, and the aggregate result was 53,528,000*l.* of hard cash. The maximum yield of the tax was in 1856-57, when England's share was 13,594,000*l.*; Scotland's, 1,276,000*l.*; and Ireland's, 1,181,000*l.*; in all, 16,051,000*l.* Therefore England's quota was 85 per cent. of the aggregate amount raised; Scotland's 8 per cent., and Ireland's 7 per cent. The second period lasted ten years; the third commenced with 1863-64. No change took place in the area over which the tax was incident, but an important concession was made to a principle advocated by certain economists. Persons at the lower end of the

scale had an abatement made to them in respect of 6ol. of their income, which they were to enjoy untaxed.

Net Receipts from Income and Property Tax in Great Britain and Ireland, Seven Years, 1864-70.

Financial Year of the Third Period.	Annual Receipt.	Rate per Pound on Incomes of £100 and upwards.*
	£	s. d.
1863-64	9,102,000	- 7
'64-65	7,986,000	- 6
'65-66	6,322,000	- 4
1866-67	5,637,000	- 4
'67-68	6,184,000	- 5
'68-69	8,618,000	- 6
'69-70	10,044,000	- 5

* An abatement of duty on 6ol. allowed on all incomes under 200l. a-year.

"A few years ago a tax of 1d. in the pound brought in 1,000,000l. sterling, but in this last period the 1d. rate was much more fruitful. Indeed, it would almost seem that for 1869-70, 1d. would yield 2,000,000l. But, as we all know, the Chancellor of the Exchequer has had resort to special expedients for an earlier and wider collection of the tax than usual, and part of the year's rich harvest must be ascribed to those devices.

"That the wealth of the United Kingdom, notwithstanding one or two alarming shocks to the general prosperity, has grown enormously since Sir Robert Peel entered upon his financial reforms, we need not stay to demonstrate. But some portion of the increase of the income tax returns is due to the more full and accurate assessments of latter years. In brief, two factors have joined to produce the result, an actual increase of the national wealth and a more truthful record of it.

"In conclusion, let us see what the income and property tax has yielded during its whole existence. Here are the figures:—

	Total of Net Receipts. £
I. Eleven years ended with 1852-53	55,292,000
II. Ten " 1862-63	107,445,000
III. Seven " 1869-70	53,893,000
Total of twenty-eight years	216,630,000

or upwards of 8,000,000l. sterling a-year on the average of the twenty-seven full years."

II.—*Assays of Gold Bullion at the Bank of England.*

THE Editor has been favoured with the subjoined note by Mr. Ernest Seyd:—

On the 19th March, 1870, the directors of the Bank of England announced that the “assays of gold bullion would, in future, be made to $\frac{1}{3000}$ th part fine.”

This change in the method of stating assays of gold bars at the Bank of England, is of great importance. Hitherto they were paid for to $\frac{1}{768}$ th part (one-eighth carat grain) fine, and the importer ran the risk of losing 1*l.* in every 768*l.*, whilst on the average the loss actually amounted to 1*l.* in every 1,536*l.* The new system states the fineness to $\frac{1}{3000}$ th (one-third millième), giving a risk of 1*l.* in 3,000*l.*, or an actual average loss of 1*l.* in 6,000*l.* The difference between these averages amounts to 0*·*493*d.*, or about $\frac{1}{2}$ *d.* per oz., equivalent, on standard gold, to a gain of 10*s.* 6*d.* for every 1,000*l.*

Small as this difference appears, it raises the actual par of exchange between England and other countries by $\frac{1}{2}$ *d.* per mille in our favour. The true par of exchange is that which results from the respective fine gold contents of the coins; the actual par depends upon the terms upon which gold bullion can be converted into such coins. In perfecting these terms, not only does the importer obtain more sovereigns for his gold, but on all exchange transactions now current, in the form of claims by bills or otherwise, by State debts, or foreign investments and interest on them, an advantage of $\frac{1}{30}$ th per cent. accrues to the country, a considerable item if calculated on the many millions involved.

The change is of more importance for the future. It is tantamount to relieving the importation of gold bullion from a tax of $\frac{1}{2}$ *d.* per oz., and to doing away with the like premium of $\frac{1}{2}$ *d.* per oz. in favour of exportation. In regard to the French exchange, for instance, whereas now the rate of 25*·*10 frs. per 1*l.*, leads to the export of bullion from our bank, it must, in future, fall to 25*·*08 $\frac{3}{4}$ frs. before withdrawals become practicable, and we shall receive gold from Paris when the rate rises to 25*·*33 $\frac{3}{4}$ frs., instead of 25*·*35 frs. as at present. The same rule applies to other exchanges: we shall receive gold sooner and keep it longer!

The directors of the Bank of England, in making this change, have shown a just appreciation of the doctrine involved in the question; they not only sacrifice the profit which they have hitherto made on the coinage, but in their accounts with the Mint, they run the risk of a trifling loss. In thus bringing the value of gold bullion nearer to the coinage, they dispose of the main question in the present controversy respecting our system, alongside of which all other questions, excepting that of international coinage, are of secondary importance. They have vindicated a great principle in national financial economy, without the slightest change in the standard of the realm—the coined sovereign itself.

The attention of the public and that of the directors of the Bank of England was first called to this matter by the pamphlet

on seignorage above alluded to,* and I have every reason to assert that this pamphlet initiated the discussion and the consequent change. The importation of gold bullion during the last two months (April and May, 1870) has greatly increased.

III.—*The Essex Agricultural Labourer.*

THE Editor has been favoured by the Rev. B. S. Clarke, of Boxted Vicarage, Colchester, with the following communication as to the industrial and social condition of the farm labourer in those parts:—

Wages.

Wages in Essex have hitherto been regulated by the price of corn. It is thought probable that they *will* depend more on supply and demand. They have recently, in some parts, been as low as 9s. a-week, and as high as 13s. They are now at 11s. and 12s. In addition to these weekly wages, each labourer, during harvest, which lasts for five weeks, has his wages doubled, and receives a daily supply of beer, or a quantity of malt and hops, equivalent to another 7s.

Horsemen receive either 13s. weekly, or 11s. and their cottages rent free.

The introduction of machinery is creating a demand for greater intelligence and better education.

Many farmers are becoming favourable to piecework, or payment for work done.

Employment.

Aged and infirm men are preferred as bird-scarers to young lads, and may thus find occasional employment.

The half-day system and alternate days' system for the employment of lads, is generally denounced. Mr. Ellis approves of a law prohibiting the employment of children earlier than 9 or 10 years of age; and would then require a certificate of three years' previous schooling; also that the lads should have to return to school if thrown out of work.

Slack hands and supernumeraries, under the old poor law, used to be employed very often three days in the week by a farmer, and three by the parish on the roadside. Now they are thrown entirely on the parish, if the farmers do not entirely relieve the parish of their charge.

Women and children, as you probably know, are employed in gangs in some parts of Essex; a practice fraught with manifold and great evil. In other parts they are generally engaged for short periods to weed and remove stones, or at pea-picking and dibbling beans. At pea-picking, temporary gangs are formed by the contractor sometimes, who take the peas for the London market. At such times, passers-by and others hear, or hear of, vile language used by women which would, if they were not thus brought out, remain to be known to few but the poor themselves. This practice also tends to increase demoralisation amongst the female poor, who are thus daily herded together, good and bad.

Other employments of women are factories, alopwork, straw plaiting, domestic service.

Relief.

Some incorrigibly slack and bad workmen resort greatly to the unions during the winter months.

* *The Question of Seignorage; or, Charge for Coining.* By Ernest Seyd, 1868. Effingham Wilson, Royal Exchange, London.

A few aged and infirm men are supported by their families; others live in the unions; others, after being required to enter the unions, are granted, if they desire it, out-door relief.

Aged couples, man and wife, are not encouraged to demand quarters in which they may live together, should they have to enter the unions.

Men who subscribe to clubs (sick clubs), complain that this is often made a reason for refusing to them the relief which is granted to others in sickness who have not been so provident. Mr. Ellis says they are granted relief expressly to encourage them to belong to clubs.

Widows generally receive out-door relief.

Mr. Ellis does not think that immorality is on the increase amongst the unmarried young women. Illegitimate children are not, he thinks, so numerous as formerly. Some few cases are known of women living in concubinage, and taking advantage of the unions for lying-in, becoming thus the mothers of three or four children.

Food.

Men with large families, all the children being young, can provide themselves with little besides bread.

The best wheaten bread is preferred.

Every one who can, bakes at home, because home-made bread "goes furthest," being pure.

Our labourers show, in many ways, the want of a meat diet.

The beer of the public-houses is almost universally greatly adulterated.

Dwellings.

The old cottages are mostly of lath and plaster, or boards. Many small farm-houses are used now as labourers' dwellings: these are substantial. Most modern cottages are of brick. But in nearly all there is not any sufficient number of rooms, especially of bedrooms; and the old cottages are badly built and in bad repair generally.

Sanitary regulations are not attended to.

The rent varies from 1*s.* to 2*s.*

Most of the cottages have small garden plots.

Some landowners refuse to their tenants the privilege of keeping either pigs or fowls, because of the temptation thence to pilfering.

General Remarks.

As the labourer leaves school at 9 or 10, he generally says that he is "no scholar." Night-schools are, to some extent, remedying this evil.

Mr. Ellis says that population is not on the increase in Essex villages. In his own parish, the last census showed *one less* than at the former census. The super-abundant labour withdraws. My farmers say they have not more labourers than they can employ.

Mr. Ellis also thinks that drunkenness is on the decrease.

Enlistment into the army is not regarded favourably.

The militiamen are not generally of good character; perhaps not originally so, but certainly not made better whilst absent from home at drill.

In most parishes there is ground let out in garden allotments to the poor. In my parish the allotments are assigned to those who have large young families.

Many benefit clubs have been held and kept up hitherto at public-houses. These, small and badly managed, are giving place to better. I send you a report and rules of the Tendring Hundred Society, which deserves your notice.

IV.—*Certified Industrial Schools.*

THE Clifton Certified Industrial School, by George C. T. Bartley.

"The *Certified Industrial Schools* occupy a position in the educational system of the country somewhat between the reformatory and the industrial pauper schools. They consist of institutions in which industrial training is provided, and in which children are lodged, clothed, and fed, as well as taught, and which have been certified by the Secretary of State for the Home Department as fit for the reception of children sent to them, under the provisions of the Industrial Schools' Act, 1866.

"The management of these institutions is left chiefly in the hands of local committees, under the inspection of an officer, who reports annually to the Secretary of State for the Home Department. This report is published and presented to Parliament. The increase of these schools is going on rapidly, no less than fourteen having been created during 1868, making a total of *seventy-seven* in England and Scotland, in working order, up to the end of that year.

"The children detained in these institutions may be divided into four classes:—

"1. Those who are apparently under 14 years of age, and who have been sent under a warrant from a magistrate, or two justices, on account of—

"(a) Begging or receiving alms in the streets.

"(b) Having been found wandering about without proper guardianship or home.

"(c) Having been found destitute, either as orphans or the children of imprisoned criminals.

"(d) Having been found in the company of reputed thieves.

"2. Those under 12, who have been charged before a magistrate with an offence punishable by imprisonment or a less punishment, but who have not been convicted of felony.

"3. Those apparently under 14, who have been represented before a magistrate, by their parents, as too unruly to control at home.

"4. Those apparently under 14, who are refractory in the workhouse or the pauper school, or whose parents (one or both) have been convicted of crime, and punished with penal servitude.

"In all these cases, a magistrate or two justices has power to send such children, for a certain time, to a certified industrial school, but the period of detention must in no case extend beyond the time when the child attains the age of 16 years.

"The object desired to be attained by these regulations is to remove children from temptation and evil company at an age when they are most susceptible for good, and while habits of industry and usefulness may still be engrafted. As such training is effected better at an early age, and as it is a condition of entrance that the children shall not have been convicted of felony, it is not surprising to find that they are taken in considerably younger than at the reformatory schools. The average ages of 2,488 children were as follows:—

	Per Cent.
Under 7 years of age	3·7
Between 7 and 9 years of age	21·0
" 7 " 11 " 	30·8
" 11 " 13 " 	33·8
Above 13 years of age	10·6
<hr/>	
Proportion who were illegitimate	3
" who had lost both parents	12
" " lost one parent	40
" " been wholly deserted	11
" " one or both parents destitute or criminals	3
" " parents living, and able to take care of them	30

"A large number of the inmates being thus received at an early age, and the attendance being compulsory, and subject to no interference on the part of parents or others, it follows that these schools have great advantages over such institutions as the one at Hanwell. In another respect, however, they labour under a disadvantage, and that is from their having so small a number of pupils. At the sixty-nine schools for which the details are published, there was, in 1868, an *average attendance* of 8,659, or at the rate of 125 in each school. This number, in itself, is too small for a well organised industrial school; but when the larger institutions are taken away from the calculation, such as the Middlesex School, with 732 pupils; the Kirkdale, 549; and ten others, each having more than 200 pupils, the average attendance at the remaining 59 schools is reduced to 77. Some, indeed, have as few as 50, 40, 28, 26, and even 8 pupils. The staff of the school with 8 pupils is two, and that with 28 (Shustoke) no less than four. At Leeds, with an average attendance of 221 children, a staff of eight only is required, at a cost, for salaries and rations, of 198*l.* 12*s.* 5*d.*, or 18*s.* per head. The four officers to look after the 28 boys at Shustoke cost no less than 99*l.* 4*s.* 5*d.*, or over 3*l.* 10*s.* per head.

"Nothing shows more clearly the disadvantage of small schools than the varying cost of the officers and their rations, to say nothing of the increased efficiency and advantage of numbers in promoting rapidity of instruction. The cost of officers' pay and rations at the Gem-street school of 77 pupils, amounts to 423*l.* 8*s.* 10*d.*; whilst at the Somerset school, with 70 pupils, it is only 183*l.* 2*s.* 1*d.* Numerous cases of a similar description could be pointed out. It would seem that, as the children are not able to be removed when once placed in the school, it would be much cheaper, and far more efficient, to combine these schools into a few very large model institutions. The only additional cost of this would be the travelling of the children on joining—a nominal item in comparison with the present outlay on the numerous petty staffs.

"The income of these schools is derived from the following sources:—

"(a) Treasury allowance.

"(b) Payments made from the parents of some of the children.

"(c) Payments from the parochial boards on account of children detained on their application.

"(d) Contributions from rates.

"(e) Private subscriptions, legacies, &c.

"(f) Payments from voluntary inmates.

"(g) Profit on industrial departments.

"As regards the first and chief item, viz., the Treasury allowance. By the Industrial Schools' Act, 1866, the Treasury is empowered to contribute such sums as, from time to time, the Secretary of State shall think fit, from sums voted by Parliament, towards the custody and maintenance of children in certified industrial schools. This sum varies. In Scotland it is 4*s.* 6*d.*, but at Clifton, and at most other places in England, it is fixed at 5*s.* per head per week.

"The *parents' contribution* in no case can exceed a sum of 5*s.* per head per week; though it is, as a rule, very much below that sum, and, in many cases, the payment cannot be enforced at all, owing to their inability to pay.

"The *parochial board's* payment, for those children whom it has been instrumental in handing over to the certified school, is a matter of arrangement between that body and the managers, subject to the approval of the Poor Law Board.

"The contribution from the rates, from the parish from which the child is received, is a considerable item in the receipts, amounting, at Clifton, and in many other cases, to as much as 1*s.* per head.

"The *subscriptions, &c.*, form the largest item next to the Treasury payments, and correspond to the local assistance obtained by most national and other schools.

"The profits on the industrial departments amounted, according to last year's report, to no less than 4,830*l.* in the year; but the exact particulars and details are difficult to ascertain with any degree of certainty. The mere fact of there being a decided pecuniary advantage derived from the industrial work is of itself sufficiently satisfactory.

"In the case of additional buildings being required, the authority of the Secretary of State has to be obtained in each case, and contributions towards the expense of building, establishing, or acquiring land for such schools, may be made, on certain conditions, from the county and borough rates.

"The rules for each school have to be printed and approved by the Secretary of State, and every school has to be inspected annually by the Home Office Inspector. Religious instruction is given, and many of the schools are entirely for Roman Catholic children. In cases where the religious persuasion of a child is different from that of the general school, a minister may visit, at certain times, for the purpose of instructing him in religion, according to any sect to which he may belong.

"The *licence system* is largely in operation in these schools, and its extension is a good sign that the work and training are really sound and effective. By this plan a child, after he or she has served eighteen months in the school, may be sent to live with some trustworthy person who is willing to take charge of him or her. These licences are renewable every three months, and the time thus spent is considered part of the period of detention. By misconduct, the licence may be withdrawn, and absconding from such a situation is considered equal to absconding from the school.

"The punishments inflicted for serious offences at these schools are chiefly, for the elder children, short terms of imprisonment, with a sentence of servitude for a term of years at a reformatory school established under the Reformatory Schools Act, 1866.

"Such is an outline of the plan of these schools which are situated in all parts of England and Scotland. The largest at present established are as follows:—

	Children.
Middlesex Industrial School, at Feltham	732
Kirkdale School, Liverpool	549
Hull School.....	478
Glasgow School	446
Liverpool Institute School.....	330
Glasgow Orphanage	305
Newcastle School	254
Aberdeen „	250
Edinburgh „	250
Manchester	226
Liverpool, St. George's Roman Catholic School	225
Leeds School	221

"Schools have also been established on the following ships, which have been given up for the purpose of training the boys as sailors:—The 'Havannah,' at Cardiff, with 108 pupils; the 'Wellesley,' at South Shields, with 46 pupils; the 'Southampton,' at Hull, with 17 pupils. The success of this plan of providing old-fashioned ships as schools, renders it probable that the number may be considerably increased.

"The remaining schools have less than 200 pupils, and the institution situated at *Clifton Wood, Bristol*, concerning which a few remarks will now be made, contains just 100 boys.

"The school premises are situated close to the river at Bristol, in a busy part of the town, and are somewhat cramped for room. They are conducted on the half-time system entirely, and receive children from the city of Bristol and county of Gloucester, together with some from Stafford.

"The industrial work pursued is—

- | | |
|----------------|------------------|
| 1. Tailoring. | 3. Brushmaking. |
| 2. Shoemaking. | 4. Laundry-work. |

"In all these branches a considerable profit is made, after deducting the whole

cost of material and tools, and likewise the wages of the teacher. Forty boys are employed in the *tailoring trade*, and they make the whole of the clothes for the school, as also the uniforms for the volunteer band. The net profit in this branch last year was 96*l.* 18*s.* 5*d.* In *shoemaking* eighteen boys were instructed, and produced boots and shoes for the school, at a profit of 30*l.* 2*s.* 7*d.*, that is to say, had these articles been purchased, they would have cost that sum over and above the outlay on the materials and the wages of the teachers. The *brushmaking* business is conducted somewhat differently, as, of course, the manufactured articles are of no use to the school. It is the practice for a manufacturer to send the materials, and for the boys to make them into the style of brush required. By this means the school runs no risk, and ample employment is given to the boys at a remunerative rate. During the year, a sum of 116*l.* 9*s.* 4*d.* was paid for making brushes, which yielded a profit of 76*l.* 2*s.* to the institution. The *laundry* is also considered an industrial department, as indeed it is; and since this work has been done by the boys themselves, a large saving has been effected, besides useful work being found for the children. The profit for last year was 29*l.* 4*s.* From this it appears that the total net profit to the funds of the school accruing from the industrial departments, in the year 1868, was 228*l.* 11*s.* 5*d.*, or considerably over 11 per cent. of the entire cost of the institution.

"This great success may be partly accounted for from the excellent plan of giving the children themselves an interest in their work. In all cases part of the profit goes to the boy, that is, on the number of articles he has produced; the earnings, therefore, of each are strictly on results. The money thus earned is deposited in the savings-bank, and on the boy leaving, it is given to him to help as a start in life. Several, by this means, have accumulated 4*l.* or 5*l.*

"Six of the most deserving boys received their freedom on licence during last year; and, up to the present time, the managers report that in only one instance since the licence system was introduced has the privilege been abused.

"A *drum and fife band* has been formed, composed of the children of the school, and its efficiency is so well known that on several occasions urgent requests have been made for the loan of it at fêtes, &c. The managers, however, wisely think that it is hardly advisable to allow the boys to go out for such occasions, when they would be removed from the eye of their officers, and liable to get into mischief. For school purposes, that is, for maintaining the tone and life of the children, as also in assisting in the systematic drill which is carried on, the superintendent considers that, with such children, a band is an essential means of instruction and improvement.

"The subjects of education, apart from industrial training, are necessarily elementary, the three 'R's' being about all that is expected, the rules of the committee stating that other subjects may be added, as the limited time and capacities of the boys may warrant. In a few cases, when any child shows a superior amount of intelligence, the course may be somewhat extended, though the principal object of the school is the industrial training of the boys, in order to form habits of labour, neatness, order, and general usefulness.

"The punishments necessary to maintain discipline are left to the superintendent, though he is required to report them to the committee. During 1868, thirty-six were inflicted, consisting of forfeiture of rewards and privileges, reduction of food, separate confinement, and, for the severest offences, moderate personal correction with a common school rod or cane.

"The expenses of the school are rather high, amounting to 2,051*l.* 13*s.* 9*d.* for the year 1868, or at the rate of 20*l.* 10*s.* per head. It is true that the profits on industrial work reduce this by 2*l.* 5*s.*, but still there can be no doubt that even then it is too high. Under the excellent management in which the school now is, it would seem probable that were the size of the school increased the cost would relatively be much reduced. Within a very short distance of this institution there are two others precisely similar, the one at Park Row, for sixty-nine boys, and the other at Cotham Road, for twenty-eight girls, each requiring the expense of a separate staff, rental, &c. This might be much reduced, besides being made more efficient, by uniting all three together.

"The results of the training on the children in their after life are certainly satisfactory, though the fruits do not seem to be so great as at the large pauper schools of Norwood, &c. This may probably be accounted for from the fact that the average age of the children on entering being greater at Clifton than at Hanwell, they have, unfortunately, in too many cases, had the seeds of crime profitably sown in them by their companions before entering the institution. The number, however, who are permanently rescued from a life of villany is very great, being not less than 80 to 85 per cent. From a return made of those who left this school in the years 1865, 1866, and 1867, it appeared that 31 were doing well; 5 were doubtful; 4 had been committed to prison; 1 to a reformatory; 3 had disappeared; two were dead; total 46. Of the five doubtful cases, and the three who had disappeared, the larger number subsequently were found to be doing well, so that really only five of the forty-six were known to have been trained in vain.

"In conclusion, it may be affirmed that these certified industrial schools supply a most important want, and that their rapid extension is highly desirable. Were sufficient schools created to contain all the children in the kingdom who come under the first and second categories of those at present in the existing institutions, as explained at the commencement, and were the law not permissive, *but obligatory*, that all such children should be sent to them, it would seem that a great part of the work sought to be achieved by compulsory education would be accomplished."—*Journal of the Society of Arts.*

V.—*The Dwellings of the London Poor, 1869.*

FROM the *Architect*:—

"Mr. John Birch, who some time since gained the Society of Arts prize for the best form of construction for labourers' dwellings, has written to the *Times* a letter, of which the following is an abstract:—

"The buildings of the *Improved Industrial Dwellings Company* are six storeys high, having in all 1,600 rooms, exclusive of sculleries; the cost being at the rate of 54*l.* 1*s.* 3*d.*, per room, showing a total expenditure of 86,503*l.* for buildings. The average rent of the larger dwelling is 6*s.* 10*d.*, and of the smaller one 5*s.* 1½*d.* per week. Gross return, 12 per cent.' Notwithstanding, the usual dividends of this company are but 5 per cent.; and a similar dividend was announced on the occasion of the last annual meeting of the company. Mr. Birch proceeds:—'The *Peabody Trustees'* buildings at Islington, Shadwell, and Spitalfields, provide about 404 distinct dwellings, comprising one, two, and three rooms respectively, containing in all 861 rooms, at an average cost of 242*l.* 11*s.* per dwelling, or 113*l.* 16*s.* 3*d.* per room, the total cost amounting to 97,994*l.* for buildings. The average rent of each dwelling is 3*s.* 11*d.*, and of each room 1*s.* 10*d.* per week. Gross return, 4½ per cent. The plans for the dwellings of the poor of Liverpool, six storeys high, contain 168 distinct dwellings. The rent of the dwelling, class 1, is 6*s.* 6*d.*; class 2, 4*s.* 10*d.*; and class 3, 3*s.* 3*d.* per week; the average rent being about 4*s.*, and for each room 1*s.* 7½*d.* per week. Gross return, 8½ per cent. The *Society of Arts' prize dwellings for labourers* have been erected under my direction in upwards of nine counties; they are built semi-detached, each dwelling containing four rooms and scullery, with pantry, fuel place, piggyery, privy, cesspit, and ashpit, washing coppers, baking ovens, fixtures and fittings, wells, rainwater tank, drainage, &c., complete; their average cost has been 131*l.* 10*s.* per dwelling, or 32*l.* 17*s.* 6*d.* per room, exclusive of scullery. The average rent per dwelling is about 1*s.* 9*d.* per week, or 5½*d.* per room per week, showing a gross rental of 4*l.* 11*s.* per annum, and a gross return of nearly 3½ per cent. The society's dwellings are, therefore, the cheapest, and, while containing one room more than the Industrial Dwelling Company's largest dwellings, cost

31*l.* 13*s.* 11*d.* less. Assuming the company's larger dwelling to contain an equal amount of accommodation, the cost would be about 216*l.* per dwelling, built in tenements; whereas the Society of Arts' dwellings have cost but 131*l.* 10*s.*, built semi-detached; and although the former may, perhaps, be somewhat more substantially built than the latter, and a considerable difference exists between the cost of buildings in London and the country, yet it must be remembered that semi-detached buildings have to bear the whole cost of the structure complete, while tenement dwellings have to bear only a proportionate cost thereof. With reference to the rentals, it will be seen that in the company's largest dwellings, containing three rooms, scullery, &c., the working man pays an average rent of 6*s.* 10*d.* per week, whereas in the Society of Arts' dwellings, containing four rooms and scullery, &c., the labourer pays but 1*s.* 9*d.* per week.'

"At the ordinary half-yearly meeting of the *Improved Industrial Dwellings Company*, held on the 8th February, 1870, at the Mansion House, the report, which was pronounced satisfactory, was agreed to *sem. com.*, and a dividend of 5 per cent. per annum was declared. The chairman (Sir Sydney Waterlow) said that this company had proved that building wholesome tenements for the working classes was a good and paying adventure. 'Five blocks of buildings are in course of erection at Ebury Street, Pimlico, to provide 110 tenements of two and three rooms each, and ten large shops, and accommodate about 600 persons. The negotiation with the late Marquis of Westminster for the lease of a site in Ebury Square, Pimlico, has been completed, and sixty-five dwellings, with four shops, affording accommodation for about 330 persons, are already in course of erection. The fifty-four additional tenements at Waterlow Buildings, Bethnal Green, are nearly completed, twenty-five being already occupied by eligible tenants. Not more than twenty persons subscribed the first portion of the capital, and the original subscribers were prompted solely by a desire to determine the long-veiled question whether the dwellings of the working classes in this great metropolis could be constructed on such a plan as would yield a reasonable interest on the money invested, or, what would be still more satisfactory, such a return as would tempt the building trade to undertake the work as an ordinary commercial enterprise.' This wished-for result has been realised.

"During 1869 the company's builder, Mr. Allen, has commenced on his own account the erection of blocks of buildings very similar to those he has erected for the company. One block has been occupied some few months, and four more blocks will shortly be finished, making eighty tenements. Mr. Allen proposes following the company's course of action, and borrowing half the cost from the Public Works Loan Commissioners. 'When the blocks are finished and all occupied, I will sell the property, subject to the loan, and repeat this operation as long as there is a demand for this class of building.' It is strange that amid the rage for money-making not yet extinct in the breasts of small builders, it should have been left for a limited company, or an art society, to usher in a new and prosperous era in building enterprise—an era in which the interests of occupier and owner are allowed to be identical."

VI.—*The Casualties of the Serpentine.*

DR. C. J. B. ALDIS, in his last report on the sanitary condition of the parish of St. George, Hanover Square, has given a statement of the number of accidents on the ice of the Serpentine during the twenty years 1844 to 1864, thus:—

230	persons were immersed but rescued.
4	" " drowned.
3	" " suffered from broken limbs and dislocations.
148	" " severely cut heads and concussions.
485	Total.

"Many of the 230 rescued were extremely bad cases, and were extricated from the ice with difficulty.

"This remark applies to all the parks. One young man in the drowned column lost his life by venturing upon the Serpentine after a twelve hours' frost, at 9 o'clock p.m. The night was dark, and the icemen had been dismissed from duty. He, with three of his companions, broke through the ice in the middle of the broadest part of the lake. Three out of the four were rescued with much exertion by the resident officers at the receiving house. The remaining three were lost by disregarding the caution put up to mark the dangerous parts of the ice."

The following tables only embrace five years each :—

"The number of skaters, immersions, and deaths during the last five years, in the Serpentine, Hyde Park, were these :—

Date.	Estimated Number of Skaters.	Immersions and Rescued.	Drowned.
1863-64	20,440	1	—
'64-65	2,000	15	—
'65-66	(No ice)	—	—
'66-67	172,900	102	—
'67-68	800	7	—
Total	196,140	125	—

"The number of accidents and deaths from bathing, and cases of suicide, which have occurred in the Serpentine during the last five years are shown here under :—

Year.	Rescued and Landed.	Brought to the Receiving House.	Drowned.	Number of Bathers Estimated Daily.	Suicides.		
					Rescued.	Prevented.	Drowned.
1864.....	47	2	1	245,905	6	1	4
'65.....	30	1	1	314,351	8	—	3
'66.....	31	2	2	238,944	1	10	9
'67.....	23	—	2	399,954	9	—	10
'68.....	38	—	7	500,999	6	2	8
Total	169	5	13	1,700,153	30	13	34

Note.—The cases under the head of "Rescued and Landed," are those bathers who have been seized with cramp, or become powerless from exhaustion, in attempting to swim across the Serpentine, and must inevitably have been drowned, but for the watchfulness and promptitude of the Royal Humane Society's boatmen.

VII. —The Stature and Bulk of Man in the British Isles.

From the *Pall Mall Gazette*:—

"Dr. Beddoes, President of the Anthropological Society of London, has produced a reprint of a memoir on this subject read before that learned body, which

has so much more of practical interest than is the case with its speculations in general that we feel warranted in recommending it strongly to the notice of our readers. The topic is one which interests or arouses a very large class of observers, and we must add that there is none on which more rash and superficial speculation is commonly vented. Every one, generally speaking, has some pet notion of his own about districts in which the race of man is above or below the average in height or strength, and as to occupations which tend to encourage or depress physical development. Nothing can serve better than the contents of this volume to correct such hasty generalisations and communicate a few stable ideas. It is, in truth, a kind of handbook of the subject. Dr. Beddoes has set to work by carefully measuring and weighing as many men between the ages of 23 and 50 as he could collect in each several locality; or, where this could not be accomplished, by availing himself of the assistance of friends. He has supplemented this inquiry by other examinations of special classes—recruits, criminals, lunatics. But these side investigations, though curious enough in their results, we shall leave unnoticed for the present, and content ourselves with the main purport of the treatise.

"The pursuit of knowledge was in this case by no means unattended with difficulties. Men could not conceive with what intent, except a sinister one, they were made to undergo the process of measuring and weighing by a doctor. In canny Scotland the least amount of difficulty was found. But 'the fishermen of some villages on the east coast proved extremely stubborn and suspicious.' In Ireland 'the unsettled political condition of the country proved an insuperable obstacle to those who made attempts on my behalf. Some Tipperary boys fairly took to their heels when it was proposed to measure them!' In Wales 'there was unusual difficulty in disabusing the natives of the idea that the inquiry had been set on foot by Government, and therefore *must* mean mischief.' In England, there was less of suspicious or superstitious opposition, but more of downright 'stupidity.' Under these impediments, and moreover, what Dr. Beddoes justly calls the 'intrinsic difficulties' of the inquiry, the work was no doubt very imperfectly done. Many inductions seem formed on a meagre amount of cases. The whole must be taken as a 'tentamen' rather than an experiment carefully worked out. But, with this preliminary caution, we may safely use, as far as it will go, the knowledge thus acquired.

"Dr. Beddoes's line of march proceeds from north to south. Beginning at the first extremity, he finds the Scottish Highlanders, 'as a rule, a tall and bulky race'—which is not, we should suppose, the character assigned to them in common report. But they vary very greatly in different districts. In some western islands (such as Lewis and Harris) they are rather short; in others (Mull, for instance) more than usually tall. The people of the western Lowlands (Ayrshire and Galloway) exceed all others in height, and indeed rank first among the inhabitants of the British Islands. The men of the eastern border and the Merse very nearly equal them in stature, and exceed them in weight, being on the whole the great men among Queen Victoria's British subjects. The average Berwickshire farmer or peasant, out of the number examined, was found to measure 5 feet 11 inches and nearly a third, and to weigh nearly 200 lbs. This is the *ne plus ultra*. The people of Aberdeenshire, and of other parts of the eastern coast, do not, however, fall far behind. These are the stalwart natives who justify the Scottish lady's retort on Dr. Johnson's definition of oats as 'the food of horses in England and of men in Scotland.' 'Yes, and where will you find such horses and such men?' The average height of man throughout Scotland, is estimated, somewhat conjecturally, at 5 feet 7½ inches.

"The Borderers on the English side, and, generally speaking, the agricultural inhabitants of our northern counties, are a tall race, like their Scottish neighbours. Lancashire seems to constitute an exception, which we are rather surprised to learn—the people being as low or lower than those of England 'generally;' and this not only in the cotton region. Good stature prevails generally as far south as the Trent, or rather the Wash, for Lincolnshire comes within the category. The Trent once passed, the conditions alter. Tallness becomes exceptional, though

found, among other tracts, in Leicestershire and Northamptonshire; 'but we are now coming to the frontier of undersized men.' Exception must also be made for parts of Norfolk and of Kent, secluded districts on the sea coast, inhabited by local breeds of comparative giants. But Suffolk men are short, though rather heavy, after the model of their own celebrated breed of horses. And the home and southern counties generally fall not only far below the north, but below the general national standard. It is very possible that this diminution of size may have been partly produced by the constant drain—not recent, as in the north, but for a long course of centuries—of the choice specimens of the race towards the great metropolis, leaving those of inferior type in possession of the ground. The men of Wales are, on the whole, short, but 'with a bulk more than proportionate:' average a little over 5 feet 6 inches. In the south-west of England stature is low, until Cornwall is reached. There, all at once, we seem to strike on a new type of men—a tall and big-boned race, average 5 feet 7½ inches; and even this standard is clearly exceeded by the people of Scilly, whose proportions certainly give the lie to the current notion that men and quadrupeds must degenerate in small islands. We should rather say, that this remarkable instance is of importance in disproof of the general doctrine, very hastily assumed for the most part, that 'breeding in and in' tends necessarily to deteriorate the human race. Evidence on the subject varies; but, on the whole, it seems that remote and secluded tribes, in which inter-marriage of relations must needs be frequent, are better gifted *au physique* than those more mixed. Such seems to be the result of Dr. Beddoes's observations as to some Highland districts; as to 'Flegg' in the north-eastern part of Norfolk; as to the Isle of Romney; and especially as to Scilly, where any one who wants to marry at all must almost inevitably marry a cousin. We might add, from popular opinion, the so-called Isles of Purbeck and Portland; but these are not tabulated in the book before us. The average height of Englishmen Dr. Beddoes fixes, not very confidently, at 5 feet 6½ inches. That of Irishmen is much the same; but (an odd singularity) they exhibit 'greater uniformity of stature. As regards weight, he allots the Scotchman 155 lbs., the Englishman 145, the Irishman 138; but owns that he is not satisfied with the sufficiency of his induction.

"We must omit Dr. Beddoes's speculation on the effect of ancestral race on stature, more curious in our view than conclusive; and we have not space to comment on what will be generally regarded as the most important part of his speculations—that which concerns differences of stature and bulk according to rank, means, and occupation. The leading fact of all seems undeniable, and it is only too discouraging. His returns do but confirm the received and well-founded opinion that populations which follow agricultural and other out-of-door employments are the tallest and strongest; whether also the healthiest is a question which these returns do not touch, but concerning which there is probably but little doubt. As regards thews and sinews, man degenerates in towns, degenerates in crowded centres of industry, degenerates in sedentary occupations. 'The physical differences between countryfolk and townfolk are,' says our author, 'the most important ones developed in my tables. * * * * It may be taken as *proved* that the stature of man in the large towns of Britain is lowered considerably below the standard of the nation, and as *probable* that such degradation is hereditary and progressive.' This, it may be remembered, as regards the mere difference between town and country life, does not exactly agree with the conclusions arrived at by Quetelet and others, through comparing the stature of the people of Brussels and other cities with that of the neighbouring Belgian peasantry. But Dr. Beddoes treats these as exceptional, and we fear he is right. The prospect is not a hopeful one, in an age in which cities are rapidly growing and rural districts losing their population. We can only rely on the progress of sanitary reform, which has certainly not said its 'last word' on the subject."

VIII.—*The Census of Newfoundland, 1869.*

FROM a local paper:—

"An abstract of the recently completed census has just appeared, from which some interesting facts may be gleaned. Judging by the rate of increase of the population, as ascertained by the last census, that of 1857, Newfoundland was expected now to number 150,000 inhabitants; whereas the actual population is found to be only 146,536. In twelve years 22,248 have been added to the population, being 18 *per cent.* during that period, or 1½ *per cent.* per annum. In *Canada* the rate of increase is from 35 to 40 *per cent.* each decade. Formerly our increase was 30 *per cent.* every ten years. But during the last six or eight years the drain by emigration has been very serious, owing to the unprosperous condition of the colony; and we have no immigration to supply the place of those who leave. The capital has felt this drain most severely, having now 1,700 fewer inhabitants than twelve years ago. This looks ominous as far as St. John's is concerned. The number of unoccupied houses in the business part of the city speaks volumes. Harbor Grace appears to be in a much more prosperous condition. Want of employment and starvation have driven thousands to the States, Canada, Australia, and other places during the last dozen years.

"The census shows that there are 85,496 *Protestants* in the island, and 61,050 *Roman Catholics*; so that the Protestant majority is 24,446. In 1857, the Protestants numbered 65,743, and Roman Catholics 56,895; so that in twelve years the former have gained 19,753, the latter only 4,155. The Protestant rate of increase has been at the rate of 37 *per cent.*, the Roman Catholic only 7 *per cent.* This is very remarkable, and proves that the Protestants are much more firmly rooted in the country, more prosperous, and more likely to be permanent. In ten years more, should the same state of matters continue, the Roman Catholics, once the most numerous of the two bodies, will be a small minority. The cause of the difference in the rate of increase is mainly owing to emigration, for there is no reason to suppose that the natural rate of increase differs to any considerable extent. The Roman Catholics, during late unprosperous seasons, suffered more from poverty than Protestants, and left the country in greater numbers. Their emigration seems to indicate that they do not 'hold their own' so well as the Protestants, and are not so thrifty and prosperous. The Roman Catholics here are all of Irish descent, and the States have great attractions for them, just as for the Irish. It is the 'promised land' of their race. The more go, the more are likely to follow; and the chances are that the next ten years will witness an increase in the emigration from this island to the States. Few go to Canada. The Protestant emigration, on the other hand, is largely directed towards Canada. Of Protestants, the census shows that 55,184 belong to the Church of England, and 28,990 to the Wesleyan Church. Presbyterians number only 974; Congregationalists 338; Baptists 10; Comparing these returns with the census of 1857, we find that the adherents of the Church of England have increased 24 *per cent.*; the Wesleyans 43 *per cent.* This seems to indicate that of the Protestant bodies the Wesleyan is, at present, the most vigorous. Emigration has told less severely on them; or else they have been making inroads on the others. In St. John's, Roman Catholics have decreased by no less than 1,893 in twelve years; the Church of England, during the same period, has been almost stationary in numbers; the Wesleyans have had but a slight increase; so that all the Churches of the capital have been suffering severely by the deportation of the people.

"Were there sufficient enterprise and a proper variety of employment for the people, there would be no want and no emigration. There are few countries where an industrious working man might be more comfortable than here, were the fine natural capabilities of the island turned to account. *But no inducement is sufficient to withdraw them from the fisheries.* The excitement, the chance of a prize in the lottery, the quick returns, the short season of labour, and the delightful lazy, basking in the sun afterwards,—all these have an irresistible charm for our

people; and, though there are now far too many mouths to fill from the uncertain returns of the fisheries, they will not turn to any other employments, and above everything they abhor the plodding industry of the farm. Within a few miles of St. John's there are tracts of very fair land, which would not only be granted free to settlers, but Government would pay six dollars for every acre cleared, and when the poor man had a farm of six acres reclaimed, he would receive a clear title to it, and a gift of as much more as he chose. Very few, however, take advantage of this offer; and for half the year the fisherman is idle."

IX.—*American Publishing Trade, 1869.*

"During the year 1869, 2,165 books, including new editions, have been published in the United States. Of these 1,680 were original American works, 367 were reprints of English books; and 118 were translations or reprints of works published on the continent of Europe.

"Amongst the number of 1,680 American original works, a large number are pamphlets, sermons, addresses, and local guides; but the fact that as many as 400 original American books of 1869 were imported and registered in England, indicates the increasing importance of American literature.

"A classification of the subjects of the gross number results as follows:—

Theology	271
Juvenile works	327
Fiction	409
Law	133
Arts, sciences, and fine arts.....	124
Trade, commerce, and political economy	80
Travel, and geographical research	82
History and biography.....	143
Poetry and the drama	123
Year books and annual publications	123
Medicine and surgery	93
Educational works	55
Miscellaneous	202
Total.....	<u>2,165</u>

Some statistics of the English publishing trade for the same year, will be found at pp. 157—8 of the present volume.

X.—*Taxation in the United States.*

THE following particulars have been tabulated from a paragraph which recently appeared in the *Times* under the title, "Taxes on an American when in his Clothes."

1st, *Hat*—

Silk plush	60 per cent.
Ribbons.....	60 "
Alpaca lining for brim.....	50 cents a pound, and 35 per cent. <i>ad valorem</i> .
Leather inside	35 per cent.
Muslin lining.....	7½ cents. a square yard.
Glue	20 per cent.

2nd, *Coat*—

Cloth	55 cents a pound, and 35 per cent. <i>ad valorem</i> .
Silk lining	60 per cent.
Alpaca used therein	50 cents a pound, and 35 per cent. <i>ad valorem</i> .
Buttons, if worsted	20 " "
Worsted braids	50 " "
Velvet for collar	60 per cent.
Red worsted padding	50 cents a pound, and 35 per cent. <i>ad valorem</i> .
Hemp padding	40 per cent.

3rd, *Pantaloons*—

Kerseymerie	50 cents a pound, and 35 per cent. <i>ad valorem</i> .
Cotton used therein	5 " square yard.
Hemp cloth for facing	40 per cent.
Metal buttons	30 "

4th, *Vest*—

Silk or satin	60 per cent.
Linen lining	35 "
Silk buttons	60 "

5th, *Braces*

35 per cent.

6th, *Undershirt*—

If silk	60 per cent.
„ worsted	50 cents a pound, and 35 per cent. <i>ad valorem</i> .
„ cotton	35 per cent.

7th, *Drawers*, the same.8th, *Shirt*—

Cotton	5 cents a square yard.
Linen for the front	35 per cent.

9th, *Buttons*

35 per cent.

10th, *Boots*—

Raw hides	10 per cent.
Tanned leather, calfskin	30 "
If patent leather	35 "
Soles	35 "

11th, *Neckerchief*—

If silk	60 per cent.
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12th, *Handkerchief*—

If silk	30 per cent.
„ linen	35 "
„ cotton	35 "

13th, *Gloves*—

Kid	50 per cent.
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Pocket knife

35 per cent.

Watch

25 "

Silk watch chain

60 "

XI.—*The Labouring Classes in Russia.**

FROM the *Times*.—

"The literary tourist has drawn so largely on the information he has been able to obtain from Her Majesty's diplomatic and consular agents abroad, that he can now scarcely complain of his province being invaded by the very men whose facts and observations have, in some cases, supplied him with all that was really valuable in his work. Otherwise it might be objected to the recently-published reports on the Condition of the Industrial Classes and on the Tenure of Land in Foreign Countries, and equally to Mr. Rumbold's report on Russian Railways, that they are not so much reports addressed through a minister or ambassador to Her Majesty's Secretary for Foreign Affairs, as essays intended for the enlightenment and recreation of that much-studied personage—the 'general reader.' Some few of the writers are only too conscious of the comparatively new part they are playing. They excuse themselves for imaginary shortcomings, and make the same professions of incompetency that one is accustomed to meet with in the prefaces of authors who, urged by the irresistible pressure of friends, present themselves, for the first time, to a discerning but severe public. The general tone, however, of all these reports is in harmony with the instructions conveyed in a circular from Lord Clarendon, which lays becoming stress on the fact that 'the care and ability with which Her Majesty's Secretaries of Legation have drawn up their reports, have secured for those documents notice and approval on their being made public in this country.' They are written, not certainly for the amusement, but, at least, for the instruction of the 'general reader;' and many of them, with more intrinsic value, possess the same sort of interest as those collections of travelling sketches from various hands of which during the last few years we have had many noticeable examples. Until quite lately the blue book was the type and symbol of all that was unreadable. Accuracy and copiousness of information must always, if they are to preserve their utility, be the main characteristics of such productions; but in regard to form and style they have already undergone a most commendable change, and we can foresee the day when so many copies of the latest blue books will be regularly subscribed for by Mr. Mudie. If the secretaries of legation are, in accordance with Lord Clarendon's direction in the circular before cited, to 'furnish information on points connected with questions of great public interest,' and if their reports are to be of a character likely to secure for them 'notice and approval on their being made public,' their publication will in due time, we presume, be made known in the usual manner by advertisement. The ordinary circulating library reader would shrink in terror from the stupendous folios which contain the reports on land tenure, but the condition of the industrial classes in foreign parts is treated in a portable volume, and Mr. Rumbold's paper on Russian Railways (in the *Reports on Manufactures and Commerce*) has the further recommendation of being adorned with a coloured illustration.

"Although, from time to time, a traveller may be found who really takes the trouble to study the country he intends to describe, the Englishman resident abroad has, of course, for this purpose, a great advantage over the mere tourist; and a secretary of legation empowered to leave his ordinary duties with a view to explorations in the pursuit of local knowledge, is, certainly, as far as outward circumstances go, in the most favourable position possible for conducting such a search. Accordingly, a mass of valuable information is to be found both in the reports on the Condition of the *Industrial Classes* and in those on the *Tenure of Land*; and although these sets of reports are published separately, it is to be observed that

* 1. *Reports from Her Majesty's Representatives respecting the Tenure of Land, &c.*

2. *Reports from Her Majesty's Representatives respecting the Condition of the Labouring Classes, &c.*

each forms the necessary complement to the other. As regards Russia, for instance, no adequate account of the condition of the labouring classes is to be found in the industrial report, while, as regards France, the same want in connection with the same subject is noticeable in the agricultural report. These wants are not defects, but have a natural origin in the degree or, perhaps we should say, the kind of civilisation belonging to each country. In Russia, the empire of villages, where the peasant is studied and feared, as the *ouvrier* is studied and feared in the capital of France, where, moreover, the workman of the six months' winter is often a peasant during the rest of the year, the question of the condition of the labouring classes belongs, as a matter of course, to the general agricultural question, as treated by Mr. Michell. In Prussia, too, country takes precedence of town; and the comprehensive agricultural reports by Mr. Harriss-Gastrell and Mr. White are to the industrial report by Mr. Petre as volumes to a pamphlet. In Austria the balance would seem to turn in favour of town; but in examining and comparing the two reports from Vienna, we must allow something for the idiosyncrasy of Mr. Lytton, the author of both, who has evidently more taste for the study of man than for that of agricultural systems. Finally, from Paris the agricultural report by Mr. Sackville West, occupies not a sixth part of the space given by Mr. Malet to his industrial report, which is of high importance, and winds up quite appropriately with a consideration of the Paris workman from a political point of view.

"The reply made to Lord Clarendon's request for information as to the condition of the *industrial classes in Russia*, has virtually been that there are no industrial classes in Russia. There are, of course, workmen in the ordinary sense of the word, and peasants doing factory and town work generally during the winter months; but the number of artisans bears no proportion to that of the myriads of peasants, and a comprehensive account of the agricultural labouring classes in Russia includes of necessity an account of the industrial classes also. In a country where land is everything, the preparation of a report on the tenure of land leads the writer far, in all directions, from his main subject; but it is only natural and right that Mr. Michell should commence his report with a history of serfdom and serf emancipation in Russia. The principle of the Emancipation Act must, by this time, be well known to all who take an interest in the subject. Russians, without much general knowledge, are fond of boasting that the emancipation of the peasant in Russia has been something essentially different from the emancipation of the peasant in Western Europe; and a tourist may occasionally be found who, having no previous information on the subject, has blindly adopted this delusion. Similarly, to escape the intolerable reproach of having invented nothing but ready-made cigarettes and a new form of tea-urn (which, however, they borrowed from the Chinese), Russians will stoutly maintain that the primitive village commune, still preserved in Great Russia, is an institution of purely Russian growth. The Russians have certainly shown ingenuity in extracting a certain amount of credit from the fact that their serfs have been emancipated not more than fifteen years after the date of serf emancipation in Austria and several of the small German States, and scarcely half a century after that of the same event in Prussia. But the principle of serf emancipation had, since the end of last century, been moving steadily from west to east, from France to the Rhine Provinces, from the Rhine Provinces to Prussia and Germany generally, until in the end it was sure to reach even Russia; and what is taking place now in that country, is nothing more, but something less, than what occurred, during the first half of the present century, throughout Germany. Everywhere, while retaining his own land, the peasant proprietor was liberated from the obligation to perform taskwork on the land of his lord. But whereas in Germany legislation has generally been directed against joint ownership, whether by village communes or by communes and manorial proprietors together, in Russia the aim has hitherto been to preserve the communes both as a means of retaining the freed peasant on the land to which he was formerly ascribed, and as a convenient unit on which to levy taxes. The period during which the Russian peasant was 'temporarily obliged' is at an end. He now occupies the position in which it was the object of the Emancipation Act to place him; and Mr. Michell's

report shows us what that position really is, what the relations of the present are to the artificially preserved commune, and what the effect of the communal system is upon the peasant.

"For an account and full explanation of the very varied conditions on which the peasants in Russia have been liberated we must, without ceremony, refer the reader to the report itself. Let us state, however, that, as a general rule, the peasants on a given estate used to cultivate *two-thirds* of the land for their own benefit, and the remaining *third* for the benefit of the lord, and that the Government has placed it within their means, by a series of payments, to purchase their portion of the estate. The lord retains his third, but he has now to pay for its cultivation. The peasants retain their two-thirds, and pay so much a year to the Government towards its definite purchase. Up to the 13th of November, 1860, the number of male peasants who had acquired absolute property in their land under this system was 3,614,882, or just one-third of the whole number of private serfs, as distinguished from about the same number of Crown serfs, liberated by the Emancipation Act. The quantity of land allotted to them was at the rate of 9·61 acres per head, and the Government payments to the proprietors amounted to 29s. 2d. per acre. This form of settlement is only one of several, but under almost every form the peasants are bound to cultivate the land allotted to them on the communal system, and, in being taken from beneath the tutelage of the lord to be placed under the rule of the commune, the peasant does, indeed, as Mr. Michell points out, seem to have exchanged the despotism of one for the despotism of many. Mr. Michell says:—

"The general laws of the country do not interfere between the commune and its members in the repartition of lands (when the communal system of tenure exists), in the assessment of taxes, in the settlement of civil claims, and in the punishment of delinquencies not amounting to crimes. The cantonal judges, unlettered peasants, may pass a sentence of imprisonment for seven days, impose a fine of 8s., or inflict a punishment of twenty strokes with a rod, while the commune may cause to be banished, or otherwise disposed of by the Government, any member who may by a majority of two-thirds at a meeting of one-half of the peasants of a village be pronounced 'vicious' or 'pernicious.' At the same time, the exercise of these large powers is not confined to the limits of the commune or the canton. By means of the passport system, of which the principal object is likewise the security of the revenue derived from poll taxation, the communes and cantons may bring within their jurisdiction peasants who, although only nominally attached to their communes, may be following occupations in distant provinces or towns. The commune or canton has only to refuse the renewal of a passport in order to place its bearer in a position which compels him to return and submit himself to the will of his fellows. These may have obtained an exaggerated account of the prosperity of their absent brother. An aged relation—perhaps a brother, a sister, or a wife—may have insisted on receiving greater assistance from him than he had previously afforded; he is, consequently, brought back, at great expense to himself, and generally to the prejudice of his trade or occupation. He returns, perhaps, in clothes different from those in which he left the patriarch's miserable hut; he looks well-fed; his hands may have become white and soft in service as a valet or a cook; he may have learnt to read and write. These appearances, while explaining to the rude peasantry the punctuality with which their more civilised brother had hitherto remitted his taxes and his contributions towards the support of his relatives, are, at the same time, taken as evidences of a further ability on his part to supply them with money. To some he may be an object of envy, to many an object of hatred and malice. All have to be propitiated by money or strong drinks, for they may give him an additional burden of land and taxes, elect him as mayor of the commune, declare him to be 'pernicious,' flog him on some plausible pretence, and otherwise apply laws which they may consider to be customary, but which often take the form of mere lynching."

"This picture of the working of the ultra-democratic system, uncontrolled either by the proprietor or by the administration, into which the old communal

system has developed or degenerated since the carrying out of the Emancipation Act, is certainly not exaggerated. Mr. Michell quotes in support of his general assertions, narratives given by the Russian newspapers of particular incidents. Thus we learn from the *Gazette of New Russia* that the wife of a peasant, having been accused of conjugal infidelity, a meeting was called by the husband, when the accused woman, without being heard, was sentenced to receive, and did receive, on her naked body, in presence of the whole village, fifteen blows with a stick. Elsewhere, in consequence of a deficit in the communal exchequer, the brickworks of a rich member were seized and sold for a tenth part of their value. In the district of E., Mr. N—— complained that the peasants had been cutting his hay, when the village tribunal pronounced this lucid judgment—that the hay had been cut, but that ‘considering the general transgressions’ the peasants must not be prosecuted. Cynicism seems to be a marked characteristic of the monk, though a native writer, author of a work on the *Condition of the Labouring Classes in Russia*, from which Mr. Michell frequently quotes, says that the juvenile peasant is a good young man. ‘He seldom,’ this witness to character goes on to say, ‘begins with despotism and harshness, and will never beat his father or mother before the age of 35.’

“Extreme parties, Democrats and Conservatives, agree in saying that, in general, the circumstances of the peasantry have not improved; but the Liberal bureaucracy and the Economists, with Mr. Bezobazoff among the number, hold that there has undoubtedly been improvement, though not to the extent to be desired. Mr. Michell, knowing too much on the subject to come to a positive decision such as a tourist, ignorant of the language, will not hesitate to pronounce after a residence of a few weeks, contents himself with showing that there is no single fact from which deductions applicable to the whole of Russia can be drawn. The Conservative and the Democrat will point to the barren districts of Northern Russia, the Liberal official to the rich cornfields of Southern Russia. The very symptoms of improvement, as alleged on the one side, are differently interpreted by the other. Thus a greater expenditure on dress, which is generally observable, is regarded by one class of writers as a proof of a tendency to dissipate the hoarded treasures of previous generations; by another as evidence of increasing wealth. But whatever conclusion Mr. Michell’s readers may come to for themselves as to the effect emancipation has had up to this moment on the condition of the Russian agricultural classes, they will certainly agree with Sir Andrew Buchanan in considering Mr. Michell’s report ‘one of the most interesting and instructive works which have yet appeared in English upon the internal condition of the Russian empire.’”

REGISTRATION OF THE UNITED KINGDOM.

No. I.—ENGLAND AND WALES.

MARRIAGES—QUARTER ENDED DECEMBER, 1869.

BIRTHS AND DEATHS—QUARTER ENDED MARCH, 1870.

A.—*Serial Table of MARRIAGES, BIRTHS, and DEATHS, returned in the Years 1870-64, and in the QUARTERS of those Years.*

Calendar YEARS, 1870-64:—Numbers.

Years.....	'70.	'69.	'68.	'67.	'66.	'65.	'64.
Marriages No.	—	176,629	176,962	179,154	187,776	185,474	180,387
Births..... „	—	772,877	786,858	768,349	753,870	748,069	740,275
Deaths „	—	495,086	480,622	471,073	500,689	490,909	495,531

QUARTERS of each Calendar Year, 1870-64.

(I.) MARRIAGES:—*Numbers.*

<i>Qrs. ended last day of</i>	'70.	'69.	'68.	'67.	'66.	'65.	'64.
March..... No.	—	37,713	36,696	36,441	37,579	36,807	37,988
June „	—	43,071	45,364	45,589	48,577	45,827	44,599
September „	—	43,831	43,509	44,086	46,257	45,852	44,675
December „	—	52,014	51,393	53,038	55,363	56,988	53,125

(II.) BIRTHS:—*Numbers.*

<i>Qrs. ended last day of</i>	'70.	'69.	'68.	'67.	'66.	'65.	'64.
March..... No.	206,441	204,055	198,584	194,763	196,753	194,130	192,947
June „	—	188,459	202,839	199,660	192,437	192,988	188,835
September „	—	190,132	192,583	190,782	179,086	181,941	181,015
December „	—	190,231	192,852	183,144	185,594	179,010	177,478

(III.) DEATHS:—*Numbers.*

<i>Qrs. ended last day of</i>	'70.	'69.	'68.	'67.	'66.	'65.	'64.
March..... No.	143,991	133,497	119,676	134,008	138,136	140,410	142,977
June „	—	118,849	110,010	112,355	128,551	115,892	116,880
September „	—	114,654	130,482	108,513	116,650	113,862	112,223
December „	—	128,146	120,454	116,197	117,352	121,245	123,451

*Annual Rates of MARRIAGES, BIRTHS, and DEATHS, per 1,000 PERSONS
LIVING in the Years 1870-64, and the QUARTERS of those Years.*

Calendar YEARS, 1870-64:—General Ratios.

YEARS.....	'70.	Mean '60-69.	'69.	'68.	'67.	'66.	'65.	'64.
Estmtd. Popln. of England in thousands in middle of each Year....	22,090	—	21,870	21,649	21,430	21,210	20,991	20,772
Persons Mar- ried	—	16·84	16·16	16·34	16·72	17·70	17·68	17·36
Births	—	35·38	35·34	36·35	35·85	35·54	35·64	35·64
Deaths	—	22·51	22·64	22·20	21·98	23·61	23·39	23·86

QUARTERS of each Calendar Year, 1870-64.

(I.) PERSONS MARRIED:—Ratio per 1,000.

Qrs. ended last day of	'70.	Mean '60-69.	'69.	'68.	'67.	'66.	'65.	'64.
March	—	14·03	14·04	13·64	13·84	14·42	14·28	14·72
June	—	17·08	15·82	16·84	17·08	18·40	17·54	17·24
September	—	16·36	15·88	15·92	16·30	17·28	17·32	17·04
December	—	19·75	18·80	18·76	19·56	20·64	21·46	20·22

(II.) BIRTHS:—Ratio per 1,000.

Qrs. ended last day of	'70.	Mean '60-69.	'69.	'68.	'67.	'66.	'65.	'64.
March	38·05	37·02	37·98	36·93	37·00	37·77	37·65	37·40
June	—	36·52	34·61	37·63	37·42	36·44	36·92	36·51
September	—	34·09	34·45	35·25	35·28	33·46	34·34	34·53
December	—	33·82	34·38	35·21	33·78	34·58	33·70	33·76

(III.) DEATHS:—Ratio per 1,000.

Qrs. ended last day of	'70.	Mean '60-69.	'69.	'68.	'67.	'66.	'65.	'64.
March	26·54	25·32	24·84	22·26	25·46	26·52	27·23	27·72
June	—	22·05	21·83	20·41	21·06	24·34	22·17	22·60
September	—	20·61	20·77	23·88	20·06	21·79	21·40	21·41
December	—	22·03	23·16	21·99	21·43	21·87	22·83	23·49

B.—Comparative Table of CONSOLS, PROVISIONS, PAUPERISM, and TEMPERATURE in each of the Nine QUARTERS ended March, 1870.

1	2	3	4	5		6	7	8		9	10
Quarters ending	Average Price of Consols (for Money).	Average Rate of Bank of England Dis- count.*	Average Price of Wheat per Quarter in England and Wales.	Average Prices of Meat per lb. at Lendenhall and Newgate Markets (by the Carcase), with the <i>Mean</i> Prices.		Average Prices of Potatoes (York Regents) per Ton at Waterside Market, Southwark.	Pauperism.		Mean Tem- pera- ture.		
				Beef.	Mutton.		Quarterly Average of the Number of Paupers relieved on the <i>last day</i> of each week.				
							In-door.	Out-door.			
1868	£		s. d.	d. d. d.	d. d. d.	s. s. s.				°	
Mar. 31	93	2'0	72 2	4½—6½ 5½	4½—6½ 5½	125—170 147	159,720	860,044	41'4		
June 30	94½	2'0	71 10	4½—6½ 5½	4½—7 5½	130—170 150	142,588	800,944	55'8		
Sept. 30	94½	2'0	59 1	4½—6½ 5½	4½—6½ 5½	120—175 147	138,284	778,804	63'9		
Dec. 31	94½	2'4	51 11	4½—7½ 5½	4½—6½† 5½	70—140 105	152,733	797,546	45'1		
1869											
Mar. 31	92½	3'0	50 2	4½—7½ 6	4½—7½ 6½	70—140 105	162,308	850,883	41'3		
June 30	93½	4'2	45 7	4½—7½ 6½	5—7½ 6½	60—130 95	145,094	816,260	52'0		
Sept. 30	93	2'9	50 11	4½—7½ 6½	5½—7½ 6½	95—125 110	137,406	781,882	61'4		
Dec. 31	93½	2'8	46 —	4½—7½ 6½	5—7½ 6½	75—100 87	152,021	813,753	48'3		
1870											
Mar. 31	92½	3'0	42 3	4½—7 5½	5½—7½ 6½	95—110 102	164,387	892,822	38'0		

* The average bank minimum rate of discount has been supplied by Mr. G. Forbes, Chief Cashier of the Bank of England.

† For the last four weeks of the quarter ending December, 1868, and subsequently, the prices, from which the quarterly average is derived, are those quoted at the Smithfield Meat Market.

C.—General Average Death-Rate Table:—Annual Rate of Mortality to 1,000 of the Population in the Eleven Divisions of England.

Divisions.	Average Annual Rate of Mortality to 1,000 Living in						
	Ten Years, 1851-60.	1869.					1870.
		Year.	Winter Quarter.	Spring Quarter.	Summer Quarter.	Autumn Quarter.	
I. London	23'63	24'66	25'43	22'25	24'31	26'66	26'73
II. South-Eastern counties	19'55	19'68	21'39	18'71	18'45	20'16	24'66
III. South Midland „	20'44	20'18	21'92	19'01	18'94	20'84	25'34
IV. Eastern counties	20'58	20'40	22'42	20'96	18'41	19'79	24'36
V. South-Western counties	20'01	19'90	21'77	20'62	17'05	20'16	26'08
VI. West Midland „	22'35	21'12	23'58	20'06	18'75	22'08	26'37
VII. North Midland „	21'10	22'04	24'35	21'74	20'02	22'05	24'93
VIII. North-Western „	25'51	25'16	28'13	23'63	23'23	25'65	28'60
IX. Yorkshire	23'09	25'80	28'08	24'79	23'87	26'45	27'36
X. Northern counties	21'99	23'21	26'05	22'63	21'34	22'83	25'08
XI. Monmouthshire and Wales	21'28	20'43	23'12	22'07	16'92	19'60	25'60

Note.—The mortality for the year 1869 is the mean of the quarterly rates.

D.—Special Average Death-Rate Table:—ANNUAL RATE of MORTALITY per 1,000 in TOWN and COUNTRY DISTRICTS of ENGLAND in each Quarter of the Years 1870-68.

	Area in Statute Acres.	Population Enumerated. 1861.	Quarters ending	Annual Rate of Mortality per 1,000 in each Quarter of the Years			
				1870.	Mean '60-69.	1869.	1868.
In 142 Districts, and 56 Sub-districts, comprising the Chief Towns	3,287,151	10,930,841	March ..	27·77	27·23	26·55	23·91
			June	—	23·42	22·78	22·22
			Sept.	—	22·98	23·32	26·84
			Dec.	—	24·53	25·75	24·25
			Year	—	24·54	24·60	24·31
In the remaining Dis- tricts and Sub-districts of England and Wales, comprising chiefly Small Towns and Country Parishes	34,087,732	9,135,383	Year	—	19·92	20·04	19·27
			March ..	24·87	22·91	22·56	20·09
			June	—	20·33	20·56	18·03
			Sept.	—	17·59	17·36	19·97
			Dec.	—	18·84	19·67	19·00

Note.—The three months January, February, March, contain 90, in leap year 91 days; the three months April, May, June, 91 days; each of the last two quarters of the year, 92 days. For this inequality a correction has been made in the calculations, also for the difference between 365 and 365 25 days, and 366 and 366 25 days in leap year.

E.—Special Town Table:—POPULATION; BIRTHS, DEATHS; MEAN TEMPERATURE and RAINFALL in last Winter Quarter, in Fourteen Large Towns.

Cities, &c.	Estimated Population in the Middle of the Year 1870.	Births in 18 Weeks ending 2nd April, 1870.	Deaths in 18 Weeks ending 2nd April, 1870.	Annual Rate to 1,000 Living during the 18 Weeks ending 2nd April.		Mean Temperature in 18 Weeks ending 2nd April, 1870.	Rainfall in Inches in 18 Weeks ending 2nd April, 1870.
				Births.	Deaths.		
Total of 20 towns in U. K.	7,216,325	68,408	50,102	37·9	27·8	38·0	5·64
London	3,214,707	30,384	21,406	37·9	26·7	38·1	3·97
Portsmouth	122,084	1,052	791	34·6	26·0	39·2	5·02
Norwich	81,087	732	559	36·2	27·7	37·0	3·55
Bristol	171,382	1,624	1,355	38·0	31·7	38·5	5·79
Wolverhampton	72,990	719	441	39·5	24·3	37·8	5·08
Birmingham	369,604	3,408	2,207	37·0	24·0	38·1	6·08
Leicester	97,427	1,017	577	41·9	23·8	37·3	5·38
Nottingham	88,888	719	612	32·5	27·6	37·6	4·33
Liverpool	517,567	4,920	3,664	38·2	28·4	38·6	4·45
Manchester	374,993	3,647	3,059	39·0	32·7	38·3	6·16
Salford	121,580	1,307	893	43·1	29·5	38·3	6·39
Bradford	143,197	1,423	859	39·9	24·1	38·0	5·19
Leeds	259,527	2,614	1,777	40·4	27·5	38·6	5·16
Sheffield	247,378	2,478	1,745	40·2	28·3	37·9	6·78
Hull	130,869	1,170	730	35·9	22·4	35·9	6·15
Sunderland	100,979	956	551	38·0	21·9	—	—
Newcastle-on-Tyne	133,367	1,340	894	40·3	26·9	36·2	—
Edinburgh	178,970	1,619	1,415	36·2	31·6	37·3	—
Glasgow	468,189	4,973	4,279	42·5	36·6	37·4	11·49
Dublin	321,540	2,306	2,288	28·7	28·5	41·1	4·89
Paris	1,889,842	—	15,178	—	32·1	—	—
Berlin	800,000	8,330	5,643	41·7	28·2	—	—
Vienna	622,087	—	4,472	—	28·8	30·9	—

F.—Divisional Table:—MARRIAGES Registered in Quarters ended 31st December, 1869-67; and BIRTHS and DEATHS in Quarters ended 31st March, 1870-68.

1 DIVISIONS. (England and Wales.)	2 AREA in Statute Acres.	3 POPULATION, 1861. (Persons.)	4 5 6 MARRIAGES in Quarters ended 31st December.		
			1869.	1868.	1867.
ENGLD. & WALES....Totals	37,324,883	No. 20,066,224	No. 52,014	No. 51,353	No. 53,038
I. London	77,997	2,803,989	8,032	8,158	8,527
II. South-Eastern	4,065,315	1,847,512	4,554	4,601	4,780
III. South Midland	3,201,290	1,295,515	3,221	3,114	3,350
IV. Eastern	3,214,099	1,142,562	3,116	2,958	3,098
V. South-Western	4,994,820	1,835,863	3,630	3,525	3,661
VI. West Midland	3,862,732	2,436,116	6,630	6,089	6,100
VII. North Midland.....	3,543,397	1,289,380	3,288	3,206	3,264
VIII. North-Western.....	2,000,227	2,935,540	7,632	7,847	8,052
IX. Yorkshire	3,654,636	2,015,541	5,653	5,737	5,905
X. Northern	3,492,322	1,151,372	3,061	3,057	3,004
XI. Monmthsh. & Wales	5,218,588	1,312,834	3,197	3,061	3,297

7 DIVISIONS. (England and Wales.)	8 9 10 BIRTHS in Quarters ended 31st March.			11 12 13 DEATHS in Quarters ended 31st March.		
	1870.	1869.	1868.	1870.	1869.	1868.
ENGLD. & WALES....Totals	No. 206,441	No. 204,055	No. 198,594	No. 143,997	No. 133,437	No. 120,095
I. London	30,384	29,623	29,891	21,406	20,088	18,144
II. South-Eastern	18,881	17,975	17,450	12,561	10,762	9,611
III. South Midland.....	12,687	12,635	11,979	8,451	7,274	6,681
IV. Eastern	10,523	10,228	9,961	7,018	6,441	5,630
V. South-Western	15,335	15,336	14,893	11,993	9,992	9,365
VI. West Midland	25,304	24,973	23,850	17,793	15,706	14,162
VII. North Midland.....	12,737	12,372	12,208	8,354	8,103	6,887
VIII. North-Western.....	32,905	32,515	31,872	23,959	23,179	21,562
IX. Yorkshire	22,144	21,990	21,602	15,107	15,324	12,283
X. Northern	13,206	13,451	12,851	8,288	8,467	8,012
XI. Monmthsh. & Wales	12,335	12,957	12,037	9,061	8,101	7,758

G.—General Meteorological Table, Quarter ended March, 1870.

[Abstracted from the particulars supplied to the Registrar-General by JAMES GLAISHER, Esq., F.R.S., &c.]

		Temperature of										Elastic Force of Vapour.		Weight of Vapour in a Cubic Foot of Air.	
		Air.			Evaporation.		Dew Point.		Air—Daily Range.		Water of the Thames.				
1870.	Months.	Mean.	Diff. from Average of 99 Years.	Diff. from Average of 29 Years.	Mean.	Diff. from Average of 29 Years.	Mean.	Diff. from Average of 29 Years.	Mean.	Diff. from Average of 29 Years.			Mean.	Diff. from Average of 29 Years.	Mean.
Jan. ...		38·3	+2·0	+0·1	36·5	-0·4	34·1	-0·8	8·6	-1·1	39·2	In. 196	In. -006	Gr. 2·3	Gr. -0·1
Feb. ...		36·2	-2·3	-3·1	33·6	-4·0	29·7	-5·4	9·6	-1·9	35·7	165	-042	1·9	-0·5
March...		39·6	-1·3	-1·9	37·5	-1·7	34·7	-1·5	12·9	-1·6	41·3	201	-014	2·3	-0·2
Mean...		38·0	-0·5	-1·6	35·9	-2·0	33·8	-2·6	10·4	-1·6	38·7	187	-021	2·2	-0·3

		Degree of Humidity.		Reading of Barometer.		Weight of a Cubic Foot of Air.		Rain.		Daily Horizontal Movement of the Air.	Reading of Thermometer on Grass.					
		Mean.	Diff. from Average of 29 Years.	Mean.	Diff. from Average of 29 Years.	Mean.	Diff. from Average of 29 Years.	Amnt.	Diff. from Average of 55 Years.		Number of Nights it was				Lowest Reading at Night.	Highest Reading at Night.
											At or below 30°.	Between 30° and 40°.	Above 40°.			
1870.	Months.									Miles.						
Jan. ...		85	- 3	In. 29·823	In. +073	555	Gr. + 1	In. 1·5	In. -0·4	296	15	14	2	14·5	41·5	
Feb. ...		78	- 7	29·693	-016	555	+ 2	0·5	-1·1	364	16	12	0	17·2	40·0	
March...		83	+ 1	29·864	+122	554	+ 4	2·1	+0·5	304	17	11	3	18·2	44·2	
Mean ...		82	- 3	29·793	+030	555	+ 2	Sum 4·1	Sum -1·0	Mean 321	Sum 48	Sum 37	Sum 5	Lowest 14·5	Highest 44·2	

Note.—In reading this table it will be borne in mind that the sign (—) minus signifies below the average, and that the sign (+) plus signifies above the average.

The mean temperature of January was 38°·3, being 2°·0 higher than the average of 99 years, and lower than the corresponding temperature in 1869, by 2°·8, but higher than in 1868, by 1°·1.

The mean temperature of February was 36°·2, being 2°·3 lower than the average of 99 years, and lower than the corresponding temperatures in any year since 1864, when 36°·0 was recorded.

The mean temperature of March was 39°·6, being 1°·3 lower than the average of 99 years, higher than in 1869 by 2°·1, lower than in 1868 by 4°·4, and higher than in 1867, when 37°·7 was registered.

The mean high day temperatures of January, February, and March were lower than their averages by 0°·6, 4°·1, and 2°·8 respectively.

The mean low night temperatures of January, February, and March were lower than their averages by 0°·5, 2°·2, and 1°·1 respectively. Therefore the months of January, February, and March were cold both by night and day.

H.—*Special Meteorological Table, Quarter ended 31st March, 1870.*

1	2	3	4	5	6	7	8	9
NAMES OF STATIONS.	Mean Pressure of Dry Air reduced to the Level of the Sea.	Highest Reading of the Thermo- meter.	Lowest Reading of the Thermo- meter.	Range of Tem- perature in the Quarter.	Mean Monthly Range of Tem- perature.	Mean Daily Range of Tem- perature.	Mean Tem- perature of the Air.	Mean Degree of Hu- midity.
	in.	°	°	°	°	°	°	
Guernsey	29·787	57·0	26·0	31·0	24·3	6·4	40·9	88
Osborne	29·767	60·0	20·4	39·6	33·2	11·1	39·1	89
Barnstaple	29·783	58·0	24·0	34·0	30·3	9·8	41·5	85
Royal Observatory	29·784	61·1	19·4	41·7	35·2	10·3	38·0	82
Royston	—	59·5	16·5	43·0	34·7	10·9	37·6	—
Lampeter	29·768	62·0	19·4	42·6	34·2	13·3	39·5	83
Norwich	29·782	58·0	21·0	37·0	31·2	9·4	37·5	87
Derby	29·741	57·0	21·0	36·0	32·7	10·7	37·8	86
Liverpool	29·792	55·4	22·8	32·6	28·4	9·0	38·6	86
Stonyhurst	29·776	55·4	21·9	33·5	28·9	10·7	38·1	86
Leeds	—	58·0	21·0	37·0	33·0	12·6	38·3	83
North Shields ...	29·787	57·0	22·7	34·3	29·4	10·4	37·2	92

10	11	12	13	14	15	16	17	18
NAMES OF STATIONS.	WIND.					Mean Amount of Cloud.	RAIN.	
	Mean estimated Strength.	Relative Proportion of					Number of Days on which it fell.	Amount collected.
		N.	E.	S.	W.			
								in.
Guernsey	1·7	8	8	7	7	6·4	42	7·88
Osborne	0·6	10	6	9	5	7·2	35	5·71
Barnstaple	1·5	7	10	7	6	4·6	41	6·94
Royal Observatory	0·7	8	7	9	6	7·1	38	4·08
Royston	—	9	5	10	6	6·6	48	3·82
Lampeter	0·8	9	7	8	6	7·3	43	10·55
Norwich	—	8	8	8	6	—	32	3·82
Derby	—	8	7	6	9	—	44	4·24
Liverpool	1·3	6	8	7	9	6·7	40	4·60
Stonyhurst	—	6	8	7	9	7·0	64	8·64
Leeds	1·6	8	7	7	8	8·0	38	4·50
North Shields ...	1·7	8	7	7	8	6·7	60	4·76

No. II.—SCOTLAND.

MARRIAGES, BIRTHS, AND DEATHS IN THE QUARTER

ENDED 31ST MARCH, 1870.

I.—Serial Table:—Number of Births, Deaths, and Marriages in Scotland, and their Proportion to the Population, Estimated to the Middle of each Year, during each Quarter of the Years 1870-66 inclusive.

	1870.		1869.		1868.		1867.		1866.	
	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.
1st Quarter—										
Births	28,674	3'55	28,429	3'54	28,736	3'60	27,952	3'52	28,883	3'66
Deaths	22,184	2'75	20,431	2'54	18,036	2'26	19,977	2'51	19,095	2'42
Marriages ..	5,631	0'69	5,291	0'66	5,287	0'66	5,856	0'66	5,642	0'71
Mean Temperature }	36°·9		40°·0		40°·6		56°·5		38°·0	
2nd Quarter—										
Births	—	—	29,472	3'67	31,025	3'89	30,375	3'83	29,808	3'78
Deaths	—	—	19,449	2'42	16,928	2'12	17,475	2'20	18,575	2'35
Marriages ..	—	—	5,596	0'69	5,660	0'71	5,627	0'70	6,034	0'76
Mean Temperature }	—		48°·4		51°·0		49°·0		49°·8	
3rd Quarter—										
Births	—	—	27,646	3'44	28,393	3'56	27,870	3'51	27,204	3'45
Deaths	—	—	16,532	2'06	16,662	2'09	15,125	1'90	15,470	1'95
Marriages ..	—	—	4,870	0'60	4,804	0'59	5,071	0'63	5,104	0'64
Mean Temperature }	—		56°·4		57°·4		55°·2		54°·4	
4th Quarter—										
Births	—	—	27,848	3'47	27,519	3'45	27,847	3'51	27,772	3'52
Deaths	—	—	19,377	2'42	17,760	2'22	16,491	2'07	18,210	2'30
Marriages ..	—	—	6,326	0'78	6,202	0'77	6,564	0'82	6,908	0'87
Mean Temperature }	—		40°·9		41°·5		42°·3		43°·5	
Year—										
Population.	—		3,205,481		3,188,125		3,170,769		3,153,413	
Births	—	—	113,395	3'54	115,673	3'63	114,044	3'59	113,667	3'60
Deaths	—	—	75,789	2'36	69,386	2'17	69,068	2'17	71,350	2'26
Marriages ..	—	—	22,083	0'68	21,853	0'68	22,618	0'71	23,688	0'75

II.—*Special Average Table:—Number of Births, Deaths, and Marriages in Scotland and in the Town and Country Districts during the Quarter ending 31st March, 1870, and their Proportion to the Population; also the Number of Illegitimate Births, and their Proportion to the Total Births.*

	Population.		Total Births.			Illegitimate Births.		
	Census, 1861.	Estimated to Middle of 1870.	Number.	Per Cent.	Ratio. One in every	Number.	Per Cent.	Ratio. One in every
SCOTLAND	3,062,294	3,222,837	28,674	3·55	28	2,822	9·8	10·1
Town districts	1,643,282	1,796,989	17,461	3·88	26	1,652	9·4	10·5
Rural ,,	1,419,012	1,425,848	11,213	3·14	31	1,170	10·4	9·6

	Population.		Deaths.			Marriages.		
	Census, 1861.	Estimated to Middle of 1870.	Number.	Per Cent.	Ratio. One in every	Number.	Per Cent.	Ratio. One in every
SCOTLAND	3,062,294	3,222,837	22,184	2·75	36	5,681	0·69	143
Town districts	1,643,282	1,796,989	14,323	3·18	31	3,812	0·84	117
Rural ,,	1,419,012	1,425,848	7,861	2·20	45	1,819	0·51	196

III.—*Bastardy Table:—Proportion of Illegitimate in every Hundred Births in the Divisions and Counties of Scotland, during the Quarter ending 31st March, 1870.*

Divisions.	Per Cent. of Illegitimate.	Counties.	Per Cent. of Illegitimate.	Counties.	Per Cent. of Illegitimate.	Counties.	Per Cent. of Illegitimate.
SCOTLAND	9·8						
Northern	5·9	Shetland	2·3	Forfar	11·8	Lanark	8·8
North-Western ..	6·3	Orkney	6·3	Perth	13·3	Linlithgow ..	9·0
North-Eastern ..	14·6	Caithness	7·8	Fife	7·8	Edinburgh ..	8·9
East Midland ..	10·6	Sutherland ...	5·8	Kinross	15·3	Haddington ..	11·0
West Midland ..	9·1	Ross and } ..	4·9	Clackman- } ..	5·6	Berwick	9·9
		Cromarty } ..	7·6	nan		Peebles	10·2
		Inverness	1·9	Stirling	10·6	Selkirk	9·4
		Nairn	13·3	Dumbarton ..	8·0	Roxburgh ..	11·4
		Elgin	18·8	Argyll	8·6	Dumfries	15·8
		Banff	14·2	Bute	4·5	Kirkcud- } ..	15·1
		Aberdeen	14·2	Renfrew	6·1	bright .. }	
		Kincardine ...	14·2	Ayr	9·3	Wigtown	14·7

IV.—*Divisional Table:—MARRIAGES, BIRTHS, and DEATHS Registered in the Quarter ended 31st March, 1870.*

1	2	3	4	5	6
DIVISIONS. (Scotland)	AREA in Statute Acres.	POPULATION, 1861. (Persons.)	Marriages.	Births.	Deaths.
		No.	No.	No.	No.
SCOTLAND Totals	19,639,377	3,062,294	5,631	28,674	22,184
I. Northern	2,261,622	180,422	164	644	560
II. North-Western.....	4,739,876	167,329	261	1,048	795
III. North-Eastern	2,429,594	366,788	437	8,168	1,899
IV. East Midland	2,790,492	523,822	906	4,444	3,737
V. West Midland	2,693,176	242,507	359	2,016	1,598
VI. South-Western.....	1,462,397	1,008,253	2,462	11,772	9,412
VII. South-Eastern	1,192,524	408,962	784	8,952	2,979
VIII. Southern	2,069,696	214,216	258	1,680	1,204

No. III.—GREAT BRITAIN AND IRELAND.

SUMMARY of MARRIAGES, in the Quarter ended 31st December, 1869;
and BIRTHS and DEATHS, in the Quarter ended 31st March, 1870.

COUNTRIES.	[000's omitted].		Marriages.	Per	Births.	Per	Deaths.	Per
	Area in Statute Acres.	Popu- lation, 1861. (Persons.)		1,000 of Popu- lation.		1,000 of Popu- lation.		1,000 of Popu- lation.
		No.	No.	Ratio.	No.	Ratio.	No.	Ratio.
England and Wales	37,325,	20,066,	52,014	2·6	206,441	10·3	143,991	7·2
Scotland	19,639,	3,062,	6,326	2·0	28,674	9·4	22,184	7·2
Ireland	20,322,	5,799,	6,281	1·1	39,808	6·9	28,200	4·9
GREAT BRITAIN AND IRELAND }	77,286,	28,927,	64,571	2·2	274,918	9·4	194,375	6·7

Notes.—The numbers against Ireland represent the marriages, births, and deaths that the local registrars have *succeeded* in recording; but how far the registration approximates to absolute completeness, does not at present appear to be known. It will be seen that the Irish ratios are much under those of England and Scotland.—*Ed. S. J.*

Trade of United Kingdom, 1869-68-67.—Distribution of Exports* from United Kingdom according to the Declared Real Value of the Exports; and the Computed Real Value (Ex-duty) of Imports at Port of Entry, and therefore including Freight and Importer's Prof.

Merchandise (excluding Gold and Silver), Imported from, and Exported to, the following Foreign Countries, &c. [000's omitted.]	Whole Years.					
	1869.		1868.		1867.	
	Imports from	Exports to	Imports from	Exports to	Imports from	Exports to
I.—FOREIGN COUNTRIES:	£	£	£	£	£	£
Northern Europe; viz., Russia, Sweden, Norway, Denmark & Iceland, & Heligoland	25,265,	9,609,	28,738,	7,085,	31,354,	6,721,
Central Europe; viz., Prussia, Germany, the Hanse Towns, Holland, and Belgium	40,485,	37,638,	37,818,	36,819,	37,302,	32,786,
Western Europe; viz., France, Portugal (with Azores, Madeira, &c.), and Spain (with Gibraltar and Canaries)	43,525,	16,510,	44,412,	15,466,	43,118,	17,462,
Southern Europe; viz., Italy, Austrian Empire, Greece, Ionian Islands, and Malta	7,963,	9,007,	7,252,	7,563,	5,642,	7,302,
Levant; viz., Turkey, with Wallachia and Moldavia, Syria and Palestine, and Egypt	25,856,	15,834,	25,243,	14,226,	20,261,	15,236,
Northern Africa; viz., Tripoli, Tunis, Algeria and Morocco	469,	299,	366,	267,	289,	274,
Western Africa	1,644,	846,	1,909,	932,	1,519,	814,
Eastern Africa; with African Ports on Red Sea, Aden, Arabia, Persia, Bourbon, and Kooria Moorla Islands	121,	176,	48,	142,	73,	135,
Indian Seas, Siam, Sumatra, Java, Philippines; other Islands	2,220,	1,520,	2,225,	1,810,	850,	2,394,
South Sea Islands	10,	18,	68,	48,	26,	20,
China, including Hong Kong	10,264,	10,420,	11,899,	9,605,	9,842,	9,037,
United States of America	42,520,	24,628,	43,063,	21,410,	41,048,	21,822,
Mexico and Central America	1,465,	843,	1,291,	1,010,	1,119,	1,050,
Foreign West Indies and Hayti	5,165,	1,853,	5,154,	3,210,	4,798,	3,318,
South America (Northern), New Granada, Venezuela, and Ecuador	1,388,	2,598,	1,229,	2,788,	1,177,	2,710,
" (Pacific), Peru, Bolivia, Chili, and Patagonia	7,754,	3,382,	7,930,	3,097,	8,259,	3,967,
" (Atlantic) Brazil, Uruguay, and Buenos Ayres	9,377,	10,319,	10,090,	8,178,	8,028,	9,984,
Whale Fisheries; Grnld., Davis' Straits, Southn. Whale Fishery, & Falkland Islands	77,	13,	146,	14,	108,	8,
Total—Foreign Countries	225,568,	145,513,	228,885,	188,165,	214,813,	135,104,
II.—BRITISH POSSESSIONS:						
British India, Ceylon, and Singapore	39,309,	20,101,	35,794,	23,561,	30,150,	24,688,
Austral. Cols.—N. So. W., Vict., and Queenld.	8,913,	9,826,	9,317,	8,895,	8,556,	6,619,
" " So. Aus., W. Aus., Tasm., and N. Zealand	3,234,	3,598,	3,254,	3,176,	4,334,	3,018,
British North America	7,734,	5,157,	6,781,	4,848,	6,807,	5,853,
" W. Indies with Btsh. Guiana & Honduras	6,214,	2,657,	6,711,	2,638,	6,058,	2,485,
Cape and Natal	2,726,	1,572,	2,702,	1,591,	2,741,	1,894,
Br. W. Co. of Af., Ascension and St. Helena	613,	657,	606,	649,	497,	674,
Mauritius	667,	382,	1,062,	384,	890,	377,
Channel Islands	451,	582,	400,	556,	404,	472,
Total—British Possessions	69,861,	44,532,	66,627,	48,298,	60,437,	46,080,
General Total	£ 295,429,	190,045,	295,512,	179,463,	275,250,	181,184,

* i.e., British and Irish produce and manufactures.

Trade of United Kingdom, 1867-63.—Computed Real Value of the Total Exports of Foreign and Colonial Produce and Manufactures to each Foreign Country and British Possession.

Merchandise Exported to the following Foreign Countries, &c. [000's omitted.]	1867.	1866.	1865.	1864.	1863.
I.—FOREIGN COUNTRIES.	£	£	£	£	£
Northern Europe; viz., Russia, Sweden, Norway, Denmark, & Iceland, & Heligoland	4,550,	4,993,	4,457,	4,291,	3,487,
Central Europe; viz., Prussia, Germany, the Hanse Towns, Holland and Belgium...	19,410,	19,130,	21,065,	20,153,	18,936,
Western Europe; viz., France, Portugal, (with Azores, Madeira, &c.), and Spain, (with Gibraltar and Canaries)	12,048,	16,465,	17,791,	16,969,	16,271,
Southern Europe; viz., Italy, Austrian Empire, Greece, Ionian Islands, and Malta	1,353,	1,417,	1,201,	1,584,	2,122,
Levant; viz., Turkey, with Wallachia and Moldavia, Syria and Palestine, and Egypt	520,	305,	426,	539,	451,
Northern Africa; viz., Tripoli, Tunis, Algeria, and Morocco	48,	46,	50,	62,	61,
Western Africa	187,	154,	206,	170,	190,
Eastern Africa; with African Ports on Red Sea, Aden, Arabia, Persia, Bourbon, and Kooria Moorria Islands	—	—	—	—	—
Indian Seas, Siam, Sumatra, Java, Philippines; other Islands	58,	17,	29,	29,	19,
South Sea Islands	—	—	—	—	—
China, including Hong Kong	350,	316,	209,	279,	209,
United States of America	2,294,	3,344,	3,943,	3,475,	4,352,
Mexico and Central America	87,	61,	88,	434,	76,
Foreign West Indies and Hayti	143,	203,	160,	200,	132,
South America (Northern), New Granada, Venezuela and Ecuador	83,	52,	60,	74,	67,
" (Pacific), Peru, Bolivia, Chili, and Patagonia	120,	64,	44,	60,	70,
" (Atlantic), Brazil, Uruguay, and Buenos Ayres	244,	200,	177,	157,	150,
Other countries (unenumerated)	37,	85,	33,	110,	60,
Total—Foreign Countries	41,532,	46,801,	49,909,	48,586,	46,653,
II.—BRITISH POSSESSIONS:					
British India, Ceylon, and Singapore	1,134,	761,	674,	908,	909,
Austral. Col.—New South Wales and Victoria, So. Aus., W. Aus., Tasm., and N. Zea	744,	978,	827,	1,069,	1,146,
British North America	867,	867,	1,013,	674,	714,
" W. Indies with Btsh. Guiana & Honduras	243,	249,	271,	515,	483,
Cape and Natal	74,	61,	57,	111,	103,
Brit. W. Co. of Af., Ascension and St. Helena....	94,	83,	78,	87,	96,
Mauritius	7,	14,	16,	19,	38,
Channel Islands	135,	147,	139,	192,	145,
Other possessions	11,	17,	12,	9,	63,
Total—British Possessions	3,309,	8,187,	8,087,	8,584,	8,647,
General Total	44,841,	49,988,	52,996,	52,170,	50,300,

IMPORTS. — (United Kingdom.) — First Two Months (January — February). 1870-69-68-67-66. — Computed Real Value (Ex-duty), at Port of Entry (and therefore including Freight and Importer's Profit), of Articles of Foreign and Colonial Merchandise Imported into the United Kingdom.

(First Two Months.) [000's omitted.] FOREIGN ARTICLES IMPORTED.		1870.	1869.	1868.	1867.	1866.
		£	£	£	£	£
RAW MATERIALS.— <i>Textile, &c.</i>	Cotton Wool	8,032,	6,702,	4,686,	6,265,	10,055,
	Wool (Sheep's) ..	1,465,	1,667,	433,	898,	691,
	Silk*	2,813,	2,296,	2,530,	2,781,	2,606,
	Flax	502,	408,	349,	580,	342,
	Hemp	382,	364,	283,	116,	254,
	Indigo	348,	377,	214,	279,	174,
		13,542,	11,814,	8,495,	10,919,	14,122,
" " <i>Various.</i>	Hides	234,	252,	202,	149,	197,
	Oils	364,	446,	437,	314,	469,
	Metals	429,	423,	401,	388,	442,
	Tallow	221,	222,	142,	76,	135,
	Timber	190,	184,	205,	278,	588,
		1,438,	1,527,	1,387,	1,205,	1,831,
" " <i>Agretil.</i>	Guano	253,	41,	171,	31,	47,
	Seeds	229,	451,	409,	433,	425,
		482,	492,	580,	464,	472,
TROPICAL, &c., PRODUCE.	Tea	2,229,	2,430,	2,169,	2,098,	1,117,
	Coffee	138,	283,	345,	255,	211,
	Sugar & Molasses	1,859,	1,525,	1,466,	1,594,	1,443,
	Tobacco	128,	141,	316,	230,	304,
	Rice	44,	224,	139,	37,	80,
	Fruits	281,	305,	264,	75,	50,
	Wines	661,	745,	745,	604,	628,
	Spirits	413,	351,	285,	293,	247,
		5,753,	6,004,	5,729,	5,186,	4,080,
FOOD	Grain and Meal.	4,700,	6,122,	5,870,	4,868,	4,340,
	Provisions	1,607,	1,639,	1,374,	987,	981,
		6,307,	7,761,	7,244,	5,855,	5,321,
Remainder of Enumerated Articles		1,668,	2,044,	1,524,	652,	632,
TOTAL ENUMERATED IMPORTS		29,190,	29,642,	24,959,	24,281,	26,458,
Add for UNENUMERATED IMPORTS (say)		7,297,	7,410,	6,240,	6,070,	6,614,
TOTAL IMPORTS		36,487,	37,052,	31,199,	30,351,	33,072,

* "Silk," inclusive of manufactured silk, "not made up, amounting to 1,374,000*l.* in 1870.

EXPORTS.—(United Kingdom.)—**First Three Months (January—March), 1870-69-68-67-66.**—*Declared Real Value, at Port of Shipment, of Articles of BRITISH and IRISH Produce and Manufactures Exported from United Kingdom.*

(First Three Months.) [000's omitted.] BRITISH PRODUCE, &c., EXPORTED.		1870.	1869.	1868.	1867.	1866.
		£	£	£	£	£
MANURES.—Textile.	Cotton Manufactures ..	13,458,	12,339,	12,452,	13,567,	15,241,
	" Yarn	3,585,	3,882,	4,168,	3,207,	3,769,
	Woolen Manufactures	5,693,	5,406,	4,262,	5,416,	5,820,
	" Yarn	1,316,	1,357,	1,681,	1,340,	1,329,
	Silk Manufactures.....	605,	287,	246,	288,	402,
	" Yarn	56,	47,	43,	58,	76,
	Linen Manufactures	1,855,	1,810,	1,713,	2,071,	2,717,
	" Yarn	622,	601,	640,	674,	630,
		27,190,	25,229,	25,205,	26,621,	29,984,
	Sewed. Apparel	419,	685,	483,	457,	617,
	Haberd. and Millnry.	1,146,	1,093,	1,089,	1,213,	1,459,
		1,565,	1,578,	1,572,	1,670,	2,076,
METALS, &c.	Hardware	1,023,	903,	833,	870,	1,037,
	Machinery	1,050,	887,	809,	1,002,	968,
	Iron	4,240,	3,596,	2,924,	2,899,	3,121,
	Copper and Brass.....	855,	676,	844,	657,	559,
	Lead and Tin	986,	1,078,	810,	684,	834,
	Coals and Culm	1,147,	1,053,	1,051,	995,	1,022,
		9,301,	8,193,	7,271,	7,107,	7,541,
Ceramic Manufcts.	Earthenware and Glass	597,	623,	555,	602,	562,
Indigenous Mfrs. and Products.	Beer and Ale.....	575,	532,	539,	555,	585,
	Butter	57,	66,	48,	69,	86,
	Cheese	27,	21,	30,	29,	39,
	Candles	27,	34,	40,	36,	54,
	Salt.....	61,	81,	89,	69,	65,
	Spirits	44,	47,	46,	41,	31,
	Soda	295,	308,	340,	368,	383,
		1,086,	1,089,	1,132,	1,167,	1,243,
Various Manufcts.	Books, Printed	134,	144,	145,	135,	139,
	Furniture	47,	45,	36,	39,	60,
	Leather Manufactures	612,	605,	559,	411,	534,
	Soap	53,	50,	60,	58,	43,
	Plate and Watches	101,	106,	75,	96,	86,
	Stationery	117,	95,	88,	81,	89,
		1,064,	1,045,	963,	820,	951,
Remainder of Enumerated Articles		2,525,	2,830,	2,600,	2,367,	2,557,
Unenumerated Articles.....		2,350,	2,216,	2,125,	2,028,	2,077,
TOTAL EXPORTS.....		45,678,	42,803,	41,423,	42,382,	46,991,

SHIPPING.—FOREIGN TRADE.—(United Kingdom.)—First Three Months
(January—March), 1870-69-68-67.—Vessels Entered and Cleared with Cargoes,
including repeated Voyages, but excluding Government Transports.

(First Three Months.)	1870.			1869.		1868.		1867.	
	Vessels.	Tonnage (000's omitted.)	Average Tonnage.	Vessels.	Tonnage (000's omitted.)	Vessels.	Tonnage (000's omitted.)	Vessels.	Tonnage (000's omitted.)
ENTERED:—									
<i>Vessels belonging to—</i>	No.	Tons.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.
Russia	73	32,	439	93	38,	48	18,	64	26,
Sweden	137	30,	219	134	27,	79	17,	126	26,
Norway	644	152,	236	771	194,	387	102,	528	123,
Denmark	283	39,	137	316	39,	315	34,	511	57,
Prussia and Ger. Sts.	376	140,	372	600	176,	484	157,	563	155,
Holland and Belgium	400	63,	158	522	69,	361	53,	388	48,
France	455	52,	114	570	57,	527	53,	570	53,
Spain and Portugal	108	37,	342	99	36,	125	38,	94	33,
Italy & other Eupn. Sts.	331	127,	384	233	95,	127	47,	111	37,
United States	133	144,	1,083	69	70,	139	142,	91	100,
All other States	1	—	272	2	1,	3	1,	—	—
United Kingdm. & } Depds.	2,941 5,183	816, 1,958,	278 378	3,409 5,239	802, 1,930,	2,595 5,115	662, 1,885	3,056 4,868	658, 1,739,
<i>Totals Entered...</i>	8,124	2,774,	341	8,648	2,732,	7,710	2,547,	7,914	2,397,
CLEARED:—									
Russia	138	57,	413	137	56,	116	46,	93	37,
Sweden	142	35,	246	91	28,	75	20,	107	26,
Norway	428	107,	250	367	90,	217	59,	296	74,
Denmark	387	55,	142	308	41,	311	40,	514	59,
Prussia and Ger. Sts.	657	199,	303	699	208,	655	197,	768	196,
Holland and Belgium	379	73,	193	424	72,	377	63,	355	59,
France	880	121,	137	645	80,	832	99,	898	105,
Spain and Portugal	99	35,	353	86	35,	108	38,	83	29,
Italy & other Eupn. Sts.	388	151,	389	297	122,	125	50,	165	59,
United States	165	163,	988	111	102,	173	167,	114	119,
All other States	4	2,	500	2	1,	2	1,	5	1,
United Kingdm. & } Depds.	3,667 6,810	996, 2,510,	271 368	3,167 6,804	835, 2,500,	2,991 6,883	780, 2,396,	3,398 5,998	764, 2,114,
<i>Totals Cleared...</i>	10,477	3,506,	334	9,971	3,335,	9,874	3,176,	9,396	2,878,

GOLD AND SILVER BULLION AND SPECIE. — IMPORTED AND EXPORTED. — (United Kingdom.) — Computed Real Value for the Three Months (January—March), 1870-69-68.

[000's omitted.]

(First Three Months.)	1870.		1869.		1868.	
	Gold.	Silver.	Gold.	Silver.	Gold.	Silver.
Imported from:—	£	£	£	£	£	£
Australia	1,728,	2,	1,000,	1,	935,	—
So. Amca. and W. Indies	433,	835,	565,	693,	628,	644,
United States and Cal.	70,	519,	164,	390,	1,569,	572,
	2,231,	1,356,	1,729,	1,084,	3,132,	1,216,
France.....	29,	219,	177,	991,	175,	256,
Hanse Towns, Holl. & Belg.	2,	5,	2,	477,	1,	98,
Portg., Spain, and Gbrltr.	12,	33,	21,	29,	264,	27,
Mta., Trky., and Egypt	33,	4,	24,	1,	11,	14,
China	—	—	—	—	—	—
West Coast of Africa	24,	—	29,	—	34,	3,
All other Countries....	50,	5,	17,	7,	383,	29,
Totals Imported....	2,381,	1,622,	1,999,	2,589,	3,950,	1,643,
Exported to:—						
France.....	929,	379,	1,238,	1,193,	2,868,	596,
Hanse Towns, Holl. & Belg.	3,	291,	22,	20,	25,	679,
Portg., Spain, and Gbrltr.	—	—	—	—	—	—
	932,	670,	1,260,	1,213,	2,893,	1,275,
Ind. and China (via Egypt).....	96,	843,	216,	1,551,	346,	225,
Danish West Indies	—	—	—	—	—	—
United States	62,	22,	500,	—	16,	—
South Africa	26,	—	—	—	48,	—
Mauritius	—	—	—	—	—	—
Brazil	37	—	145,	—	185,	16,
All other Countries....	185,	49,	286,	104,	56,	57,
Totals Exported....	1,338,	1,584,	2,107,	2,868,	3,544,	1,573,
Excess of Imports	1,043,	38,	—	—	406,	70,
„ Exports	—	—	108,	279,	—	—

REVENUE.—(UNITED KINGDOM.)—31st MARCH, 1870-69-68-67.

Net Produce in YEARS and QUARTERS ended 31st MARCH, 1870-69-68-67.

[000's omitted.]

QUARTERS, ended 31st March.	1870.	1869.	1870.		Corresponding Quarters.	
			Less.	More.	1868.	1867.
	£	£	£	£	£	£
Customs	4,941,	5,485,	544,	—	5,547,	5,527,
Excise	7,014,	5,990,	—	1,024,	5,742,	5,535,
Stamps	2,425,	2,542,	117,	—	2,498,	2,554,
Taxes	2,157,	431,	—	1,726,	414,	389,
Post Office	1,170,	1,200,	30,	—	1,100,	1,100,
Telegraph Service	100,	—	—	100,	—	—
	17,807,	15,648,	691,	2,850,	15,301,	15,106,
Property Tax	5,784,	3,271,	—	2,513,	3,067,	2,156,
	23,591,	18,919,	691,	5,363,	18,368,	17,261,
Crown Lands	114,	102,	—	12,	101,	93,
Miscellaneous	1,124,	1,089,	—	35,	909,	1,088,
Totals	24,829,	20,110,	691,	5,410,	19,378,	18,442,
			NET INCR. £4,718,878			

YEARS, ended 31st March.	1870.	1869.	1870.		Corresponding Years.	
			Less.	More.	1868.	1867.
	£	£	£	£	£	£
Customs	21,529,	22,424,	895,	—	22,650,	22,303,
Excise	21,763,	20,462,	—	1,301,	20,162,	20,670,
Stamps	9,248,	9,218,	—	30,	9,541,	9,420,
Taxes	4,500,	3,494,	—	1,006,	3,509,	3,468,
Post Office	4,670,	4,660,	—	10,	4,630,	4,470,
Telegraph Service	100,	—	—	100,	—	—
	61,810,	60,258,	895,	2,447,	60,492,	60,331,
Property Tax	10,044,	8,618,	—	1,426,	6,177,	5,700,
	71,854,	68,876,	895,	3,873,	66,669,	66,031,
Crown Lands	375,	360,	—	15,	345,	330,
Miscellaneous	3,205,	3,356,	151,	—	2,586,	3,073,
Totals	75,434,	72,592,	1,046,	3,888,	69,600,	69,434,
			NET INCR. £2,842,261			

REVENUE.—UNITED KINGDOM.—QUARTER ENDED 31ST MARCH, 1870:—

An Account showing the REVENUE and other RECEIPTS in the QUARTER ended 31st of March, 1870; the ISSUES out of the same, and the Charges on the Consolidated Fund at that Date, and the Surplus or Deficiency of the Balance in the Exchequer on the 31st of March, 1870, in respect of such Charges.

Received:—

	£
Income received, as shown in Account I (see ante, p. 804)	24,828,766
Amount raised by Exchequer Bonds, issued per Act 32 and 33 Vict., cap. 22	600,000
Amount raised on Account of Fortifications, per Act 30 and 31 Vict., cap. 145	100,000
Amount received in Repayment of Advances for Public Works, &c. ...	604,840
„ „ Greenwich Hospital...	252,367
	<hr/> £26,865,973

Paid:—

	£
Net Deficiency of the Balance in the Exchequer to meet the Charge } on the 31st of December, 1869, as per last Account	5,127,262
Amount applied out of the Income to <i>Supply Services</i> (including } 1,600,000 <i>l.</i> Exchequer Bonds paid off)	11,881,748
Amount advanced for New Courts of Justice	1,197
Greenwich Hospital	132,367
Charge of the <i>Consolidated Fund</i> on the 31st of March, 1870, viz:—	
Interest of the Permanent Debt	£5,181,951
Terminable Annuities	1,815,979
Interest of Exchequer Bonds	26,000
Principal of Exchequer Bills	11,100
Interest of "	26,754
" Deficiency Advances	3,149
The Civil List	101,997
Other Charges on Consolidated Fund	423,210
Advances for Public Works, &c.	286,885
Sinking Fund	63,745
	<hr/> 7,440,770
	<hr/> 24,568,344
Surplus balance in the Exchequer on the 31st of March, 1870, beyond } the amount of the charge on the Consolidated Fund, on that date, } payable in June quarter, 1870	"1,782,629
	<hr/> £26,865,973

* Charge on 31st March, 1870	£7,440,770
Paid out of growing produce in March quarter, 1870	616,752
Portion of the Charge payable in June quarter, 1870	6,824,018
To meet which there was in the Exchequer on the 31st of } March, 1870	8,606,647
Surplus balance as above:—	
Great Britain	£1,874,807
Ireland	407,822
	<u>1,782,629</u>

**BRITISH CORN.—Gazette Average Prices (ENGLAND AND WALES),
First Quarter of 1870.**

[This Table is communicated by the Statistical and Corn Department, Board of Trade.]

Weeks ended on a Saturday, 1870.		Weekly Average. (Per Impl. Quarter.)					
		Wheat.		Barley.		Oats.	
		s.	d.	s.	d.	s.	d.
Jan.	1	43	8	36	9	20	10
"	8	44	5	35	11	20	1
"	15	44	1	36	4	21	4
"	22	43	6	36	2	20	10
"	29	42	8	35	7	20	4
<i>Average for January</i>		43	8	35	11	20	8
Feb.	5	42	9	35	8	20	6
"	12	41	9	34	6	19	10
"	19	40	8	34	2	19	10
"	26	40	7	33	9	20	7
<i>Average for February</i>		41	3	34	5	20	2
March	5	41	—	33	7	20	8
"	12	40	9	33	10	20	10
"	19	41	9	34	4	21	1
"	26	42	5	34	5	21	2
<i>Average for March</i>		41	5	34	—	20	11
<i>Average for the quarter</i>		43	8	34	10	20	7

RAILWAYS.—PRICES, January—March;—and TRAFFIC, January—March, 1870.

[Abstract from "Herald's Journal" and the "Times."]

Total Capital Ex- pended Mins.	Railway.	For the (£100). Price on			Miles Open.		Total Traffic. 13 Weeks. (000's omitted.)		Traffic pr. Mile pr. Wk. 13 Weeks.		Dividends per Cent. for Half Years.					
		1st Mar.	1st Feb.	1st Jan.	'70.	'69.	'70.	'69.	'70.	'69.	31 Dec., '69.		30 Jun., '69.		31 Dec., '68.	
											s.	d.	s.	d.		s.
£					No.	No.	£	£	£	£	s.	d.	s.	d.	s.	d.
57.9	Lond. & N. Westn.	121½	123½	124	1,479	1,416	1,549,	1,484,	81	80	70	—	55	—	67	6
49.9	Great Western	68½	63½	58½	1,386	1,386	973,	937,	54	52	32	3	20	—	15	—
21.3	„ Northern.....	114½	112	110	487	487	507,	490,	80	77	77	6	42	6	75	—
29.5	„ Eastern	38½	37½	38½	746	746	453,	450,	47	47	10	—	5	—	Nil	—
17.6	Brighton	43	45½	47½	368	365	239,	258,	49	54	10	—	Nil	—	12	6
17.3	South-Western	91	94	94	553	553	271,	286,	37	40	52	6	40	—	52	6
20.2	„ Eastern	75	76½	78½	346	346	307,	310,	68	67	40	—	25	—	40	—
213.7		78	79	79	5,365	5,299	4,299,	4,215,	62	61	41	9	26	9	37	6
34.5	Midland	121½	123½	123½	825	778	875,	794,	81	78	65	—	57	6	57	6
23.3	Lancsh. and York.	125½	128½	128	423	411	603,	604,	109	113	67	6	67	6	67	6
16.0	Sheffield and Man.	50½	52	53½	249	251	280,	288,	87	88	25	—	20	—	25	—
40.4	North-Eastern	125½	128	126½	1,275	1,260	1,000,	912,	60	56	72	6	57	6	60	—
114.2		106	108	108	2,772	2,700	2,758,	2,598,	76	74	57	6	50	7	52	6
22.3	Caledonian	77½	78	76½	—	—	679,	677,	—	—	Nil	—	35	—	37	6
6.2	Gt. S. & Wn. Irland.	98	100	100	419	419	—	—	—	—	50	—	50	—	45	—
356.4	Gen. aver.	88	89	89	—	—	—	—	—	—	44	—	36	7	42	7

Consols.—Money Prices, 1st March, 92½ to 1.—1st Feb., 92½.—1st Jan., 92½ to 1.

Exchequer Bills.—1st March, 2s. dis. to 3s. pm.—1st Feb., par. to 5s. pm.—1st Jan., 2s. dis. to 2s. pm.

BANK OF ENGLAND.—WEEKLY RETURN.

Pursuant to the Act 7th and 8th Victoria, c. 32 (1844), for Wednesday in each Week, during the FIRST QUARTER (Jan.—March) of 1870.

[0,000's omitted.]

ISSUE DEPARTMENT.					COLLATERAL COLUMNS.	
1	2	3	4	5	6	7
ISSUE DEPARTMENT.					COLLATERAL COLUMNS.	
Liabilities.	Assets.				Notes in Hands of Public. (Col. 1 minus col. 16.)	Minimum Rates of Discount at Bank of England.
Notes Issued.	DATES. (Wednesdays.)	Government Debt.	Other Securities.	Gold Coin and Bullion.		
£	1870.	£	£	£	£	1869. Per ann. 4 Nov. 3 p.ct.
Mins.		Mins.	Mins.	Mins.	Mins.	
33,21	Jan. 5	11,01	3,98	18,21	23,84	
33,80	" 12	11,01	3,98	18,30	23,59	
33,44	" 19	11,01	3,98	18,44	23,41	
33,40	" 26	11,01	3,98	18,40	23,00	
33,57	Feb. 2	11,01	3,98	18,57	23,29	
33,73	" 9	11,01	3,98	18,73	22,81	
33,81	" 16	11,01	3,98	18,82	22,54	
33,92	" 23	11,01	3,98	18,93	22,28	
34,10	Mar. 2	11,01	3,98	19,10	22,64	
34,13	" 9	11,01	3,98	19,13	22,29	
34,20	" 16	11,01	3,98	19,20	21,95	
34,34	" 23	11,01	3,98	19,34	22,10	
34,90	" 30	11,01	3,98	19,90	22,76	

BANKING DEPARTMENT.

8	9	10	11	12	13	14	15	16	17	18	Totals of Liabi- lities and Assets.
Liabilities.					DATES. (Wednesdays.)	Assets.					
Capital and Rest.		Deposits.		Seven Day and other Bills.		Securities.		Reserve.			
Capital.	Rest.	Public.	Private.			Government.	Other.	Notes.	Gold and Silver Coin.		
£	£	£	£	£	1870.	£	£	£	£	£	
Mins.	Mins.	Mins.	Mins.	Mins.		Mins.	Mins.	Mins.	Mins.	Mins.	
14,55	3,24	10,24	18,29	,50	Jan. 5	16,31	20,25	9,37	,89	46,82	
14,55	3,31	6,31	18,34	,50	" 12	15,91	16,51	9,71	,89	43,02	
14,55	3,33	7,31	18,08	,51	" 19	15,81	17,03	10,03	,92	43,79	
14,55	3,34	8,35	17,37	,45	" 26	14,21	18,57	10,40	,87	44,06	
14,55	3,36	6,23	21,10	,45	Feb. 2	13,83	20,65	10,28	,94	45,70	
14,55	3,37	7,38	18,79	,46	" 9	14,33	18,37	10,92	,92	44,55	
14,55	3,39	9,39	16,54	,46	" 16	14,33	17,78	11,27	,95	44,34	
14,55	3,37	9,27	17,29	,45	" 23	13,83	18,50	11,64	,96	44,94	
14,55	3,62	9,79	17,27	,45	Mar. 2	13,83	19,49	11,46	,93	45,69	
14,55	3,63	10,91	16,76	,41	" 9	13,83	19,65	11,84	,95	46,27	
14,55	3,64	11,57	16,59	,42	" 16	13,79	19,75	12,25	,98	46,77	
14,55	3,67	12,25	15,78	,38	" 23	13,83	19,58	12,24	,97	46,63	
14,55	3,68	11,29	17,16	,36	" 30	12,83	21,10	12,14	,97	47,05	

LONDON CLEARING; CIRCULATION, PRIVATE AND PROVINCIAL.

The London Clearing, and the Average Amount of Promissory Notes in Circulation in ENGLAND and WALES on Saturday in each Week during the FIRST QUARTER (January–March) of 1870; and in SCOTLAND and IRELAND, at the Four Dates, as under.

[0,000's omitted.]

ENGLAND AND WALES.					SCOTLAND.				IRELAND.		
DATES. <i>Saturday.</i>	<i>London: Cleared in each Week ended Wednesday.*</i>	<i>Private Banks. (Fixed Issues, 4,04).</i>	<i>Joint Stock Banks. (Fixed Issues, 2,74).</i>	<i>TOTAL. (Fixed Issues, 6,78).</i>	<i>Weeks ended</i>	<i>£ and upwards.</i>	<i>Under £5.</i>	<i>TOTAL. (Fixed Issues, 2,75).</i>	<i>£ and upwards</i>	<i>Under £5.</i>	<i>TOTAL (Fixed Issues, 6,35).</i>
1870.	£	£	£	£	1870.	£	£	£	£	£	£
Jan. 1	51,46	2,66	2,28	4,94	Jan. 1	1,92	3,05	4,97	3,54	3,51	7,05
" 8	92,24	2,76	2,36	5,12							
" 15	72,80	2,80	3,39	6,19							
" 22	91,40	2,81	2,38	5,19							
" 29	64,62	2,79	2,33	5,12	Jan. 29	1,83	2,86	4,69	3,51	3,38	6,89
Feb. 5	95,46	2,74	2,29	5,03							
" 12	74,18	2,67	2,28	4,95							
" 19	85,96	2,61	2,27	4,88							
" 26	60,72	2,54	2,26	4,80	Feb. 26	1,78	2,78	4,56	3,49	3,32	6,81
Mar. 5	89,26	2,57	2,27	4,84							
" 12	77,30	2,59	2,29	4,88							
" 19	82,63	2,58	2,30	4,88							
" 26	67,38	2,61	2,34	4,95	Mar. 26	1,73	2,74	4,47	3,53	3,20	6,73

* The Wednesdays *preceding* the Saturdays.

FOREIGN EXCHANGES.—*Quotations as under, LONDON on Paris, Hamburg and Calcutta;—and New York, Calcutta, Hong Kong and Sydney, on LONDON—with collateral cols.*

1	2	3	4	5	6	7	8	9	10	11	12
DATES.	Paris.				London on Hamburg.	New York.	Calcutta.		Hong Kong.	Syd- ney.	Standard Silver in bars in London.
	London on Paris.	Bullion as Arbitrated.		Prem. or Dis. on Gold per Mille.			India Council.	At Calcutta on London.			
		Agnst. Engd.	For Engd.								
1870.		pr. ct.	pr. ct.			pr. ct.	d.	d.	d.	pr. ct.	d.
Jan. 1.	25·40	—	—	—	13·11½	108½	28½	23½	53½	1 pm.	60½
„ 15.	37½	—	—	—	10½	109	28	23½	53	„	„
Feb. 5.	42½	—	—	—	„ ½	109	„	„	„ ½	„	„ ½
„ 19.	37½	—	—	—	„ ½	109	„	„	„	„	„ ½
Mar. 5.	40	—	—	—	„	108½	„	„	„	„	„ ½
„ 19.	42½	—	—	—	„	109	„	„	„	½ pm.	„ ½

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JOURNAL OF THE STATISTICAL SOCIETY,

SEPTEMBER, 1870.

OPENING ADDRESS of the PRESIDENT of SECTION F (ECONOMIC SCIENCE and STATISTICS), of the BRITISH ASSOCIATION for the ADVANCEMENT of SCIENCE, at the FORTIETH MEETING, at LIVERPOOL, September, 1870. By PROFESSOR W. STANLEY JEYONS, M.A., F.S.S.

THE field of knowledge which we cultivate in this Section is so wide, that it would be impossible, in any introductory remarks, to notice more than a few of the important questions which claim our attention at the present time.

The name Statistics, in its true meaning, denotes all knowledge relating to the condition of the State or people. I am sorry to observe, indeed, that many persons now use the word *statistical* as if it were synonymous with *numerical*; but it is a mere accident of the information with which we deal, that it is often expressed in a numerical or tabular form. As other sciences progress, they become more a matter of quantity and number, and so does our science; but we must not suppose that the occurrence of numerical statements is the mark of statistical information.

In order, however, that any subject can be fitly discussed by a Section of this Association, it should be capable of scientific treatment. We must not only have facts, numerical or otherwise, but those facts must be analysed, arranged and explained by inductive or deductive processes, as nearly as possible identical with those which have led to undoubted success in other branches of science. I have always felt great gratification that the founders of this Association did not in any narrow spirit restrict its inquiries and discussions to the domain of physical science. The existence of this Section is a standing recognition of the truth, that the condition of the people is governed by definite laws, however complicated and difficult of discovery they may be. It is no valid reproach against us that we cannot measure, and explain, and predict, with the accuracy of a chemist or an astronomer. Difficult as may be the problems presented to the experimentalist in his investigation of Material Nature, they are easy compared with the problems of Human

Nature, of which we must attempt the solution. I allow that our knowledge of the causes in action is seldom sure and accurate, so as to present the appearance of true science.

There is no one who occupies a less enviable position than the Political Economist. Cultivating the frontier regions between certain knowledge and conjecture, his efforts and advice are scorned and rejected on all hands. If he arrives at a sure law of human nature, and points out the evils which arise from its neglect, he is fallen upon by the large classes of people who think their own common sense sufficient; he is charged with being too abstract in his speculations; with overlooking the windings of the human heart; with undervaluing the affections. However humane his motives, he is lucky if he escape being set down on all sides as a heartless misanthrope. Such was actually the fate of one of the most humane and excellent of men, the late Mr. Malthus. On the other hand, it is only the enlightened and wide-minded scientific men who treat the political economist with any cordiality. I much fear that, as physical philosophers become more and more successful, they tend to become like other conquerors, arrogant and selfish; they forget the absurd theories, the incredible errors, the long enduring debates out of which their own knowledge has emerged, and look with scorn upon our economic science, our statistics, or our still more vague body of knowledge called social science, because we are still struggling to overcome difficulties far greater than ever they encountered. But, again, I regard the existence of this Section as a satisfactory recognition of the absolute necessity of doing our best to cultivate economic subjects in a scientific spirit.

The great and everlasting benefits which physical science has conferred upon the human race are on every side acknowledged; yet they are only the smaller half of what is wanted. It daily becomes more apparent that the highest successes in the scientific arts and manufactures are compatible with deep and almost hopeless poverty in the mass of the people. We subdue material nature; we spin and weave, and melt and forge with a minimum of labour and a maximum of result; but of what advantage is all this while human nature remains unsubdued, and a large part of the population are too ignorant, careless, improvident or vicious, to appreciate or accumulate the wealth which science brings. Chemistry cannot analyse the heart; it cannot show us how to temper the passions or mould the habits. The social sciences are the necessary complement to the physical sciences, for by their aid alone can the main body of the population be rendered honest, temperate, provident, and intelligent.

In this kingdom during the last thirty or forty years we have tried a mighty experiment, and to a great extent we have failed.

The growth of the arts and manufactures, and the establishment of free trade have opened the widest means of employment and brought an accession of wealth previously unknown; the frequent remission of taxes has left the working classes in fuller enjoyment of their wages; the poor laws have been reformed and administered with care, and the emigration of millions might well have been expected to leave room for those that remain. Nevertheless within the last few years we have seen pauperism almost as prevalent as ever, and the slightest relapse of trade throws whole towns and classes of people into a state of destitution little short of famine. Such a melancholy fact is not to be charged to the political economist; it is rather a verification of his unheeded warnings; it is precisely what Malthus would have predicted of a population which, while supplied with easily earned wealth, is deprived of education and bribed by the mistaken benevolence of the richer classes into a neglect of the future. What can we expect while many still believe the proverb, that "Where God sends mouths, He sends food," and while a great many more still act upon it?

I am glad to say that, in spite of all opponents, we have an education act. Three centuries ago the State recognised the principle that no person should be allowed to perish for want of bread; for three centuries the State has allowed the people to perish for want of mind and knowledge. Let us hope much from this tardy recognition of the greatest social need, but let us not withdraw our attention from many other causes of evil which still exist in full force. I wish especially to point out that the wise precautions of the present poor law are to a great extent counteracted by the mistaken humanity of charitable people. Could we sum up the amount of aid which is, in one way or other, extended by the upper to the lower classes, it would be almost of incredible amount, and would probably far exceed the cost of poor law relief. But I am sorry to believe that however great the good thus done the evil results are probably greater. Nothing so surely as indiscriminate charity tends to create and perpetuate a class living in hopeless poverty. It is well known that those towns where charitable institutions and charitable people most abound, are precisely those where the helpless poor are most numerous. It is even shown by Sir Charles Trevelyan, in a recent pamphlet, that the casual paupers have their London season and their country season, following the movements of those on whom they feed. Mr. Goschen and the poor law authorities have of late begun to perceive that all their care in the administration of relief is frustrated by the over-abundant charity of private persons, or religious societies. The same family often joins parish relief to the contributions of one or more lady visitors and missionaries. Not only improvidence but gross

fraud is thus promoted, and cases are known to occur where visitors of the poor are duped into assisting those who are secretly in possession of sufficient means of livelihood.

Far worse, however, than private charity are the innumerable small charities established by the bequests of mistaken testators. Almost every parish church has its tables of benefactions, holding up to everlasting gratitude those who have left a small patch of land, or an annual sum of money, to be devoted to pauperising the population of the parish throughout all time. Blankets, coals, loaves or money are doled out once or twice a-year, usually by the vicar and churchwardens. More or less these parish charities act as a decoy to keep the most helpless part of the population nominally within the fold of the Church. The Dissenters, where they are strong enough, retaliate by competing for the possession of the poor by their own missions, and thus the reproach of the Roman Catholic Church, that it fostered mendicancy, holds far too true of our present sects. With private charity no law can interfere, and we can do nothing but appeal to the discretion of individuals. With testamentary charities it is otherwise.

We are far yet from the time when so beneficial a measure will be possible, but I trust that we are rapidly approaching the time when the whole of these pernicious charities will be swept away. We have in this country carried respect to the wishes of past generations to an extent simply irrational. The laws of property are a purely human institution, and are just so far defensible as they conduce to the good of society. Yet we maintain them to the extent of wasting and misusing no inconsiderable fraction of the land and wealth of the country. It would be well worthy, I think, of Mr. Goschen's attention, whether all small parish charities might not be transferred to the care of the guardians of the poor, so as to be brought under the supervision of the Poor Law Board, and distributed in accordance with sound principle. I should refuse to see in all such public endowments any rights of private property, and the State which undertakes the ultimate support of the poor, is bound to prevent its own efforts to reduce pauperism from being frustrated, as they are at present.

And while speaking of charities, it is impossible to avoid noticing the influence of medical charities. No one could for a moment propose to abolish hospitals and numerous institutions which are absolutely necessary for the relief of accidental suffering. But there is a great difference between severe accidental disease or injury, and the ordinary illnesses which almost every one will suffer from at various periods of his life. No working man is solvent unless he lay by so much of his wages as will meet the average amount of sickness falling to the lot of the man or his family. If

it be not easy to determine this amount, there are, or may be, sick clubs which will average the inequalities of life. In so far as trades unions favour the formation of such clubs, they manifest that spirit of self-reliance which is the true remedy of pauperism.

But the wealthy classes are, with the best motives, doing all they can to counteract the healthy tendencies of the artisans. They are continually increasing the number and resources of the hospitals, which compete with each other in offering the freest possible medical aid to all who come. The claims of each hospital for public support is measured by the number of patients it has attracted, so that, without some general arrangement, a more sound system is impossible. Hospitals need not be self-supporting, and in cases of really severe and unforeseen suffering, they may give the most lavish aid; but I conceive that they should not relieve slight and ordinary disease without a contribution from those benefited. As children are expected to bring their school pence, though it be insufficient to support the school, and as Government has wisely refused to sanction the general establishment of free schools, so I think that every medical institution should receive small periodical contributions from the persons benefited. Arrangements of the kind are far from uncommon, and there are many self-supporting dispensaries, but the competition of free medical charities has, to a great extent, broken them down.

The importance of the subject with which I am dealing, can only be estimated by those who have studied the statistics of London charities, prepared by Mr. Hicks and published in the "Times" of 11th February, 1869. It is much to be desired that Mr. Hicks, or some other statistician, would extend a like inquiry to all parts of the United Kingdom, and give us some notion of the amount of money expended in the free relief of the poor.

Closely connected with this subject is that of the poor law medical service. Admirable efforts are being made to improve the quality of the medical aid which all persons sufficiently poor can demand, and some unions have already erected hospitals almost perfect in their comfort and salubrity. It will be conceded by every one, that those sick persons, whose charge is undertaken by the public, ought to be treated with care and humanity. Where medical aid is given at all, it ought to be good and sufficient. But the subject seems to me to be surrounded with difficulties, out of which I cannot find my way. The better we make the poor law medical service, the more we shall extend and deepen the conviction, already too prevalent, that the poor may make merry with their wages when well and strong, because other people will take care of them when sick and old. We thus tend to increase and perpetuate that want of self-reliance and providence which is the

crowning defect of the poorer classes. In this and many other cases it seems as necessary as ever that our humane impulses should be guided by a stern regard to the real results of our actions.

I now turn to a subject which must come prominently before our Section. I mean the future financial policy of the kingdom. We are now at a most peculiar and happy epoch in our financial history. For thirty years or more a reform of the tariff has been in progress, and it is only a year since the last relic of the protective system was removed by Mr. Lowe's repeal of the small corn duty. One great scheme is thus worked out and completed. Henceforth, if duties are remitted, it must be on a wholly different ground—as simple remission of revenue—not as the removal of protective duties which benefit some to the injury of others. It might well be thought difficult to overlook the difference between a tax for revenue purposes and one for protective purposes; and yet there are not a few who seem not to see the difference. We are still told that there is no such thing as free trade, and that we shall not have it until all custom houses are swept away. This doctrine rests, however, upon a new interpretation of the expression free trade, which is quietly substituted for the old meaning. Cobden, however much he might be in favour of direct taxation, took care to define exactly what he meant by free trade. He said:—

“What is free trade? Not the pulling down of all custom houses, as some of our opponents try to persuade the agricultural labourers. Our children, or their offspring, may be wise enough to dispense with custom house duties; they may think it prudent and economical to raise revenue by direct taxation; we do not propose to do that.

“By free trade we mean the abolition of all protective duties.

“We do not want to touch duties simply for revenue, but we want to prevent certain parties from having a revenue which is to benefit themselves, but advantage none else; we seek the improvement of Her Majesty's revenue.”

Let us, then, candidly acknowledge that in Cobden's sense free trade is actually achieved. Any one the least acquainted with our revenue system, knows with what skill our tariff has been adjusted by Peel, Gladstone, and Lowe, so that the articles taxed should be entirely foreign production, or else the customs duty should be exactly balanced by an excise duty. We have now a very large revenue of about forty millions, raised by customs or excise duty on a small number of articles, with the least possible interference with the trade of the country. A very large part, too, is raised upon spirituous liquors, the consumption of which we desire, on other grounds, to reduce rather than encourage.

For the future, then, the remission of customs duties will be

grounded on other motives than it has often been in the past, and it becomes an open question whether there are not other branches of revenue far more deserving attention. It must not be supposed that foreign trade is to be encouraged before everything else. The internal trade and industry of the country is at least equally deserving of attention, and it may be that there are stamp duties, licence duties, rates, or other taxes which, in proportion to the revenue they return, do far more injury than any customs duties now remaining. It is impossible, for instance, to defend the heavy stamp duty paid by the articled clerks of attorneys on their admission; and, if I went into detail, it would be easy to point out scores of cases where the attention of the Chancellor of the Exchequer is needed.

I may point to local taxation especially as a subject requiring attention, even more than any branch of the general revenue. Until within the last few years the importance of the local rates was to a great extent overlooked, because there were no adequate accounts of their amount. The returns recently obtained by the Government are even now far from complete, but it becomes apparent that at least one-fourth part of the whole revenue of the kingdom is raised by these neglected rates and tolls. Their amount is more than equal to the whole of the customs duties, upon the reform of which we have been engaged for thirty years. Nevertheless we continue to allow those rates to be levied substantially according to an act passed in the reign of Queen Elizabeth. The recent partial inquiry by a select committee has chiefly served to prove the extent and difficulty of the reform which is needed. Whole classes of property which were unrated three centuries ago are unrated now, and it will be a matter of great difficulty to redress in an equitable manner inequalities which have been so long tolerated. The subject is of the more importance because there is sure to be a continuous increase of local taxation. We may hope for a reduction of the general expenditure, and we shall expect rather to reduce than raise the weight of duties. But all the more immediate needs of society, boards of health, medical officers, public schools, reformatories, free libraries, highway boards, main drainage schemes, water supplies, purification of rivers, improved police, better poor law medical service;—these, and a score of other costly reforms, must be supported mainly out of the local rates. Before the difficulties of the subject become even greater than they now are, I think that the principles and machinery of local taxation should receive thorough consideration. At present the complexity of the laws relating to poor rates is something quite appalling, and it is the herculean nature of the reform required which perhaps disinclines financial reformers from attacking it. Several most able members of the Statistical

Society have, however, treated the subject, especially Mr. Frederick Purdy, Professor J. E. T. Rogers, and Mr. Dudley Baxter.

I am glad to be able to draw the attention of the Section to the fact that the Statistical Society of London have received from Mr. William Tayler, one of the members, the sum of fifty guineas, to be awarded by the Society, to the author of the best essay on the Local Taxation of the United Kingdom.

We have considerable opposition raised to customs and excise duties, because they are indirect taxes, but the fact is, that direct taxation is practically impossible. Careful examination shows that it is difficult to draw any clear distinction between taxes in this respect. There are few or no direct taxes borne only by those who pay them. The incidence of the local rates, for instance, is an undecided question, but I do not doubt that they fall to a considerable extent indirectly. The incidence of the stamp duties is almost wholly indirect, but defies investigation. The income tax no doubt approaches closely to the character of a direct tax, but it has the insuperable inconvenience of being paid by the honest people and escaped by the rogues. I am inclined to look upon schemes of universal direct taxation as affording much scope for interesting speculation, but as being, in practice, simply impossible.

I have another point to urge. Is not the time come when the remission of taxes, whether of one kind or another, may properly cease to be a main object? The surplus revenue of future years will doubtless be more than sufficient to enable the Chancellor of the Exchequer to reform or abolish those small branches of internal revenue which occasion far more inconvenience and injury than they are worth. There will still, should war be happily avoided, remain a considerable surplus, and the question presses upon us, Shall this revenue be relinquished, or shall it be applied to the reduction of the national debt?

In considering this subject, I may first point out that there probably exists no grievous pressure of taxation, and no considerable inequality as regards the several classes of the people. We are now able to estimate, with some approach to accuracy, the actual proportion of income which is paid by persons of different incomes. The accounts now published by Government, and the labours of several eminent statisticians, especially Professor Leone Levi and Mr. Dudley Baxter, permit us to make this calculation. The most recent addition to our information is contained in an elaborate paper read by Mr. Baxter before the Statistical Society in January, 1869, and since published in the form of a volume. Mr. Baxter has, with great industry and skill, collected a mass of information concerning the habits of persons in different classes of society, which he combines with the published accounts of the revenue, and with the

statistics of income previously estimated by himself and Mr. Leone Levi. Both he and Professor Levi come to the conclusion that the working classes, so long as they make a temperate use of spirituous liquors and tobacco, pay a distinctly less proportion of their income to the State, and even intemperance does not make their contribution proportionally greater than those of more wealthy persons.

It happens that, before I was aware of Mr. Baxter's elaborate inquiries, I undertook a similar inquiry on a much more limited scale, by investigating the taxes paid by average families spending 40*l.*, 85*l.*, and 500*l.* a-year. My conclusions, as might be expected, were not exactly coincident with those either of Mr. Baxter or Professor Levi; yet there was no great discrepancy. I conceive that families of the classes mentioned, consuming moderate quantities of tobacco and spirituous liquors, all pay about 10 per cent. of their income in general or local taxation, allowance being made for the recent reduction of the sugar duty and the repeal of the corn duty.* But there is this distinction to be noticed, that the taxation of the middle classes is mostly unavoidable, whereas at least half the taxation of the poorer classes depends upon the amount of tobacco and spirituous liquors which they consume. Families of artisans or labourers, abstaining from the use of these stimulants, are taxed very lightly, probably not paying more than 4 or 5 per cent. of their income. Now, while many men are total abstainers, and many are intemperate, I think we cannot regard the taxes upon stimulants as we do other taxes. The payment of the tax is voluntary, and is, I believe, paid without reluctance. The more we thus investigate the present incidence of taxation, the more it seems inexpedient to proceed further in the reduction of the customs and excise duties. The result would be to leave by far the larger mass of the people almost free from anything but local taxes, and to throw the whole cost of Government upon the wealthier classes, and especially those who have tangible property.

But I venture to raise another question. I doubt whether the remission of taxation does as much good at the present day as it would at a future time. There are comparatively few signs that the wages of the working classes, even when sufficient, are saved and applied really to advance the condition of the recipients. All is expended in a higher scale of living, so that little permanent benefit results; and when bad trade comes again, there is as much distress as ever. It is only with the increase of education and temperance, that the increase of wages will prove a solid advantage. Thus, when the really hurtful taxes are removed, it by no means follows that the further remission of taxes leads to the profitable

* See Appendix A, p. 323.

expenditure of income. The money may be spent in a way far more profitable to the whole nation than it will be spent by those whose taxes are remitted.

I am glad on this and many other accounts, that the propriety of reducing the national debt is beginning to be very generally recognised. The question was ably raised by Mr. Lambert during the recent session, and both in the House of Commons and in the newspaper press, many strong opinions were expressed in favour of reduction. In fact, there was almost a general feeling that Mr. Lowe's small measure of reduction was altogether inconsiderable compared with our opportunities and the greatness of the task before us. During every interval of peace we ought to clear off the charges incurred during the previous war, otherwise we commit the serious error of charging to capital that which should be borne by income. If a railway company needs periodically to renew its works, and charges all the cost to capital, it must eventually become insolvent; so if at intervals we require to maintain the safety and independence of this country or its possessions by war, and do it all by borrowed money, we throw the whole cost of our advantage upon posterity. If, indeed, one great war could free us from all future danger we might capitalise the cost and leave it as a perpetual mortgage upon the property of the country; but if the effect of any war wears out, and we are liable to be involved in new wars at intervals, then we cannot fairly or safely go adding perpetually to the mortgage upon the national property. The wars at the commencement of this century have secured for us fifty years or more of nearly unbroken peace, and yet at the end of this period of ever-advancing wealth, the great debt stands almost at the same figure as at the commencement. We enjoy the peace and leave our descendants to pay its cost.

If it be said, that this country is now far wealthier and more able to endure the annual charge of the debt than ever before, I would point out that the expense of war is also greatly increased. If we consider the cost of the Abyssinian Expedition, or the vast debts which other nations have lately or are now incurring, it is evident that we may have in a great war to incur hundreds of millions of debt, or else relinquish our prominent position. Let us hope that such calamities will be spared to us, but let us not suppose that we may avoid them by being negligent and unprepared. It is not many months since Mr. Lowe declared that we must maintain our system of taxation substantially as it is, in order to supply revenue adequate to possible emergencies. The wisdom of his view is already apparent, but I hold that he should have gone further, and strengthened our hands by a measure for the reduction of the debt worthy of his boldness and the surplus at his command. But the

fact is that little can be done in such a matter by any minister unless he be supported by a strong public opinion.

The remarks which I most wished to make are now completed, and there only remain one or two minor topics to which I will more briefly allude.

The excessive mortality in great towns seems to demand more close attention than it has received. For many years Liverpool stood at or near the top of the list as regards mortality, but by strenuous efforts it has been rendered more healthy. Manchester, on the other hand, although often considered the best paved, best watered, and in some other respects the best managed town in the country, has lately taken a very high or even the highest place as regards mortality. In Salford, too, the death-rate has steadily grown in recent years. It would seem as if we were entirely at fault, and that all our officers of health, sanitary commissioners, and the improvements of science and civilisation, cannot prevent nearly twice as many people from dying as would die in a healthy and natural state of things.

Within the last few months attention has been drawn to this subject by a prolonged discussion in the "*Manchester Guardian*." It was occasioned by Mr. Baxendell, who brought before the Manchester Literary and Philosophical Society certain statistics tending to show that the mortality of Manchester was not due to any peculiar excess in the rate of infantile mortality. It was an old opinion that in a manufacturing town like Manchester, the children are neglected, while the mothers are employed at the mills; but Mr. Baxendell showed that the deaths of infants under five years actually bear a less proportion to the whole number of deaths than in any other of the large towns. This conclusion was somewhat severely criticised by the Medical Officer of Health for Salford, and by Dr. Ransome and Mr. Royston, of the Manchester Sanitary Association. The latter gentlemen pointed out that the true mode of computation is to compare the deaths of infants with the number of infants living, and the deaths of adults with the number of adults. But even when calculations are made in this manner it still turns out that the adult mortality of Manchester is as excessive as the infantile mortality. Manchester mothers are thus exonerated from the charge of neglect, but at the same time a most important and mysterious problem is left wholly unsolved.

Our perplexity must be increased when we consider that Liverpool and Manchester, though both very unhealthy towns, are quite contrasted as regards situation and the kinds of employment they present. If we compare Liverpool with other seaports, such as Bristol, Hull, and London, it is found to exceed them all considerably in mortality. Bolton, Bury, Preston, Stockport and other towns

have more women employed than Manchester, comparatively speaking, yet they are more healthy. The size of the town, again, is not the chief cause, for London, though many times more populous than any other town, is decidedly healthy. The sites of the towns do not give any better solution of the difficulty, London having probably as unhealthy a site as any of the other large towns.

I am surprised that more attention has not been drawn to the probable influence of a poor Irish population in raising the death-rate. It occurred to me that the great towns which are most unhealthy agree in containing a large proportion of Irish, and agree in nothing else which I can discover. To test this notion I have calculated, from the census returns of 1861, the ratio of the Irish-born adult population in all the larger towns of Great Britain.* It then becomes apparent at once that the unhealthy towns of Liverpool, Manchester, Salford, Glasgow, Dundee, &c., are all distinguished by possessing a large population of Irish, whereas the healthy towns of London, Birmingham, Bristol, Hull, Aberdeen, &c., have less than $7\frac{1}{2}$ per cent. of adult Irish residents. Sheffield is the only remarkable exception to this induction. It might seem that, in order to confirm this conclusion, I should show the death-rate in Dublin to be very high. On turning to the accounts of the Irish Registrar-General, we find the Dublin rate to be low, but then we find that the Dublin birth-rate is even lower in proportion. In fact the registry system in Ireland gives results so much lower in every respect than those of Great Britain, that we must either conclude the state of population to be utterly different there from what it is here, or we must suppose the registration to be very incomplete. If after further investigation this suggestion should be found to explain the high and mysterious mortality of many towns, it will, I think, relieve us from some perplexity, give us more confidence in sanitary measures, and point out exactly where most attention is needed.

The next two or three years will be a time of great interest to statisticians on account of the approaching census of 1871. We shall soon possess data which will assist us in many investigations, and enable us surely to estimate many of the changes in progress.

There is only one suggestion concerning the census which it occurs to me to make, namely, that it ought to be taken in as nearly as possible a uniform manner in all the three parts of the United Kingdom. It need hardly be pointed out that the value of statistics almost entirely depends upon the accuracy and facility with which comparisons can be made between different groups of facts, and a very slight variation in the mode of making the enumerations or the census or tabulating the results, will lead to error, or else render comparison impossible.

* See Appendix B, p. 323.

Reasons, the force of which I cannot estimate, have led to the establishment of distinct registry offices in Edinburgh and Dublin. Not only are the ordinary reports concerning births, deaths, and marriages drawn up independently in the several offices for England, Scotland, and Ireland, but even the census is performed by the separate authorities in the three kingdoms. Consequently we have really three censuses and three reports, and at least in 1861 the tables were constructed to a great extent in different modes in these reports. Thus there is a total want of that unity and uniformity which, in a scientific point of view, is indispensable. If there is one thing more than another which demands perfect unity and centralisation, it is the work of the census and the Register Office; but if we cannot have one central office, let us hope that the several Registrar-Generals will co-operate so as to produce the nearest approach to uniformity in the census. The different territorial divisions and arrangements may require some modifications in the mode of enumeration, but except in this respect, there should be perfect identity.

I should like to direct your attention for a moment to the very copious and excellent statistical publications with which we are now furnished by Government. Owing partly to the prejudice against blue books, and partly probably to the ineffective mode of publication, the public generally are not aware that for the sum of 8*d.* any person can obtain the Statistical Abstract of the Board of Trade, containing an admirable selection from the principal statistics of the country during the preceding fifteen years. For a few shillings, again, may be had the "Miscellaneous Statistics" of the Board of Trade, furnishing a wonderful compilation of facts concerning three recent years, though I wish that this information could be brought more nearly up to the time of publication.

By degrees a considerable amount of system has been introduced into our parliamentary papers. They have always been sufficiently copious—rather too copious in fact—but until the last twenty years they consisted mainly of disconnected and accidental accounts, which were exceedingly troublesome to statisticians, and often of no use whatever. It is from regular annual publications, carried on in a uniform manner, that we derive the most useful information, that which is capable of comparison and digestion. The annual reports which have for some years been issued from various Government departments, are the best source of statistics; and I may suggest that there are several public departments, for instance the Mint, which do not yet give any regular annual reports.

I would especially point again to the last report of the Inland Revenue Department as a model of what we might desire from other departments. In addition to the usual annual report, it con-

tains an abstract of the previous reports for ten years back, and, what is still more valuable, complete tables of all inland duties from their first establishment, some of the tables going back to the beginning of last century. We are thus provided with a complete history of the inland revenue. I cannot but believe that in many other departments is much valuable information which might be furnished to the public in like manner at a very slight cost.

Under other circumstances I should have had something to say to you concerning international money. Just before the present unhappy war broke out, a commission in Paris had reported in a manner greatly facilitating the adoption of an international money in the British Empire and in America; at the same time a conference was about to be held in Berlin, which would probably have resulted in some important measures as regards Prussia. Everything, in short, was favourable to the early adoption of a common money. But it need hardly be said, that all hope of such a great reform must be deferred until peace is once again firmly established.

Since this Association last met, the great experiment of transferring the telegraphs to Government control has been carried out. The result has been to some extent disappointing. The proprietors of the telegraphs, when negotiating with Government, discovered that their property was about twice as valuable as they had before considered it. The enormous profits which they made out of the sale, seem to me to throw immense difficulty in the way of any similar transfer in the future. It becomes, for instance, simply chimerical to suppose that the Government can purchase the railways, which are about two hundred and fifty times as valuable as the telegraphs, and which, if purchased in the same way, would cost considerably more than the whole national debt. The working of the telegraphic department, again, confirms the anticipation that we must not expect from it any such results as followed the establishment of the penny post. Many people already look forward to the time when the uniform cost of a telegram will be 6d., but I believe that they will be disappointed. They overlook the essential difference that a great number of letters may be conveyed almost as cheaply as one letter, whereas every telegram occupies the wires for a definite time, and requires to be delivered, generally speaking, by a special messenger. Thus, if we are to have the rapid delivery without which telegrams seem to me nearly valueless, the property and staff, and, of course, the expenses of the department, must expand nearly proportionally to the business. A reduction of the rate to 6d., by bringing a great increase of work, would greatly augment the expenses of the department, and inflict a loss upon the nation.

APPENDIX A.

Estimate of the proportion of expenditure (see p. 317) paid as taxes, general or local, by average families of man and wife, with one child over 10 years of age, and one child under 10 years. The families are supposed to expend respectively the total amounts of 40*l.*, 85*l.*, and 500*l.* a-year, and to represent the classes of labourers, artisans, and middle class persons. The family expending 500*l.* a-year, is supposed to maintain three servants.

	Family Spending per Annum.		
	£40.	£85.	£500.
	Per cent.	Per cent.	Per cent.
Taxes on necessities—Tea, sugar, coffee, } fruit.....	1'0	1'1	0'6
Local taxes	2'5	2'4	1'9
Income tax, house, and legacy duty	—	—	3'4
Stimulants—Beer, spirits, wine, tobacco.....	5'5	4'1	1'8
Total per cent. of income	9'0	7'6	7'7

In the above statement no allowance is made for many of the stamp, licence, and minor customs duties, or the net revenue of the post office, so that six or seven millions of revenue remain unaccounted for. These duties fall mainly upon the wealthier classes, and if they could be apportioned, would probably raise the payments of the middle class and labourers' families to 10 per cent., the artisan's payment remaining somewhat less than 10 per cent. No account is taken of intemperate consumption of spirituous liquors and tobacco. Many of the licence duties are taken into account in calculating the effect of the customs duties, and an allowance of 20 per cent. is added to the duties on commodities to cover the interest charged by the dealers who advance the duties.

APPENDIX B.

On the Connection between the Irish Population and the Rate of Mortality in Towns.

I have tested the suggestion made in the text (see p. 320) in a variety of ways, and have, in almost every case, met with confirmatory evidence.

In calculating the percentage of Irish population in any town, I have taken the numbers only of the population of 20 years of age and upwards, for the obvious reason that if an Irish family live for

a few years in England, they may have children registered as English born, although they live under the same sanitary conditions as their Irish parents.

The following statement compares the proportion of Irish population with the mortality in some of the principal towns:—

	Proportion of Irish Population, Census of 1861.	Rate of Mortality per 1,000, on the Average of 1851-60.
Liverpool.....	34·9	33·3
Manchester.....	20·6	31·6
Salford.....	12·7	26·1
Newcastle	9·0	27·4
Bradford	8·6	25·7
Leeds	7·5	27·8
Birmingham	7·3	26·5
London	5·7	23·6
Sheffield	5·2	28·5

The high mortality of Liverpool and Manchester is here in striking conformity with the large Irish population, and more recent returns of the Salford mortality would also exhibit conformity. Sheffield is the only serious exception.

In another calculation, I took a list of the mortality of eighteen English towns in the year of the census of 1861. I separated the towns into three groups, according as the mortality was—

1. At the rate of 28 or more per 1,000.
2. Between the rates of 24 and 28.
3. At the rate of 24 or less.

The percentage of Irish population *in the aggregate* of each group, and the average mortality was then found to be as follows:—

	Percentage of Irish Population.	Average Mortality.
<i>Towns of High Mortality—</i> Liverpool, Manchester, Newcastle, Pres- ton, and Bolton	21·9	29·8
<i>Towns of Medium Mortality—</i> Leicester, Ashton, Oldham, Blackburn, } Sheffield, Leeds	7·0	26·0
<i>Towns of Least Mortality—</i> Bradford, Nottingham, Birmingham, } Dudley, Stoke, Wolverhampton, } Stourbridge	5·6	22·9

With the above we may compare London, which has an Irish population of 5·7 per cent., and a mortality of 23·6, on the average of the years 1851-60.

Observing in another list that Altrincham, Bakewell, and War-

wick were districts of low mortality, the rate scarcely exceeding 20 in 1,000, I calculated the Irish percentage as follows:—

	Per Cent.
Altrincham	6'0
Bakewell	2'2
Warwick	2'0

Or aggregating the three towns together, we find the Irish population to be on the whole 2'2 per cent., or less than half the average proportion of Irish throughout England and Wales, which is 4'52 per cent.

These facts appeared to me to be almost of a conclusive character by themselves, but in extending the comparison to the Scotch towns, we meet with the strongest possible corroboration. The eight principal Scotch towns happen to fall apart into two very distinct groups, the particulars of which are shown in the following table:—

	Proportion of Irish Population, Census of 1861.	Rate of Mortality per 1,000, on the Average of 1855-63.
<i>Towns of Large Irish Population—</i>		
Dundee	23'8	27'3
Glasgow	23'0	29'8
Greenock	22'0	31'1
Paisley	18'1	26'5
<i>Towns of Small Irish Population—</i>		
Edinburgh	7'4	24'7
Leith	6'6	22'6
Perth	6'4	24'9
Aberdeen	1'8	23'1

Forming averages of the above numbers, we have—

	Average Proportion of Irish Population.	Average Mortality
Towns of large Irish population	21'7	28'7
„ small „	5'5	23'8

It may not be unworthy of remark, that in the most unhealthy towns—Liverpool, Manchester, Salford, &c.—the Irish women are in excess of the men; whereas in the most healthy towns—such as Hull, Leith, and Aberdeen, the women are even fewer than the men. The following is the proportion of Irish women to the whole number of women in the healthy places:—

	Per Cent.
Leith	5'3
Aberdeen	1'5
Bakewell	1'4
Warwick	1'9
Altrincham	4'7

We should naturally turn to ascertain whether the mortality in Ireland at all bears out the apparent effect of Irish immigration in England. Taking the average of a few years of the returns of births and deaths in Dublin, I find that the rates are in both cases almost exactly the same, namely, 26·1 per 1,000. In one return the deaths were 33·6, while the births were only 24·7. As the birth-rate much exceeds the death-rate in England and other progressive countries, we must either regard the population of Ireland as being in a very abnormal state, or we must reject the returns as wholly unworthy of confidence.

The Editor of the *Statistical Journal* has often appended a note to the Irish returns, calling attention to their apparent untrustworthiness. Until we know to what extent the returns are defective, they are simply misleading and mischievous; but if they at all approximate to the truth, they lend strong support to the supposition that English mortality is greatly influenced by Irish immigrants.

STATISTICAL NOTES *on the* FREE TOWN-LIBRARIES *of* GREAT BRITAIN
and the CONTINENT. By WILLIAM E. A. AXON, ESQ., F.R.S.L.

[Read before the Statistical Society, June, 1870.]

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I.—*Introductory.*

FREE town-libraries are essentially a modern institution, and yet can boast of a greater antiquity than is generally supposed, for we find a town-library at Auvergne in 1540, and one at a still earlier date at Aix. Either the munificence of individuals or the action of corporate authorities has given very many of the continental towns freely accessible libraries, some of them of considerable extent. In England the history of town libraries is much briefer. There is reason to believe that London at an early date was possessed of a common library; and Bristol, Norwich, and Leicester, had each town-libraries, but the corporations proved but careless guardians of their trust, and in each case allowed it to be diverted from the free use of the citizens for the benefit of a subscription library. At Bristol, in 1613, Mr. Robert Redwood “gave his lodge to be converted into a library or place to put books in for the furtherance of learning.” Some few years after, Tobie Matthew, Archbishop of York, left some valuable books in various departments of literature for free access “to the merchants and shopkeepers.” The collection was subsequently enriched by the bequest of John Heylin, Esq., in 1766, of the library and MSS. of the well-known Dr. Heylin. The use of the library was, in 1773, granted to the originators of a subscription library, who proceeded to resolve that no keeper of an inn or coffeehouse should become a member of their body, or have access to those books which the pious Archbishop of York had left for the benefit of the merchants and shopkeepers. The library was restored to its original purpose in 1856, when it contained about 2,000 volumes. In 1867 this number had increased to 8,000 volumes.

The libraries of Norwich and Leicester have also been restored to their original functions as town-libraries.

The paucity of our public libraries, twenty years ago, excited the attention of Mr. Edward Edwards, to whose labours in this field the country owes so much. Having collected a large amount of statistics as to the comparative number of these institutions in different States, he communicated the result of his researches to the Statistical Society, in a paper which was read on the 20th of March, 1848, and was printed in this *Journal* in the August following.

The paper revealed some unpleasant facts, and showed that, in respect of the provision of public libraries, Great Britain occupied a very unworthy position. In the United Kingdom (including Malta) Mr. Edwards could only discover 29 libraries having more than 10,000 volumes, whilst France could boast 107, Austria 41, Switzerland 13. The number of volumes to every hundred of the population of cities containing libraries, was, in Great Britain 43, France 125, Brunswick 2,353. Of the 29 British libraries enumerated by Mr. Edwards, some had only doubtful claims to be considered as public, and only one of them was absolutely free to all comers, without influence or formality. That one was the public library at Manchester, founded by Humphrey Chetham in 1665.*

* A paragraph has appeared in some of the literary papers on the comparative provision of libraries in Europe, which merits a few words:—

Signor Natoli, the Minister of Public Instruction in Italy, says that where Great Britain has 1,771,493 volumes in its public and large private libraries, or 6 to every 100 persons in its population; Italy has 4,149,281, or 19½ to every 100 persons; France has 4,389,000, or 11·7 to each 100 persons; Austria, 2,408,000, 6·9 per cent.; Prussia, 2,040,450, or 11 per cent.; Russia, 582,090, or 1½ per cent.; Bavaria, 1,268,500, or 26½ per cent.; and Belgium, 509,100, or 10½ per cent.

The figures above quoted from Signor Natoli's report on public libraries in the "*Statistica del Regno d'Italia*," are the weak part of what very competent authorities have pronounced to be a really valuable account of the Italian libraries. As respects five of the States mentioned, the figures are a quotation from Mr. Edward Edwards's "*Statistical View of Public Libraries*," published twenty years ago; as respects two other States, they are slightly varied from the old figures. No regard whatever is paid to the lapse of time, or to the fact that the figures of 1849 relate only to libraries "exceeding 10,000 volumes" in extent. The data for a really correct estimate of this character does not exist, at least so far as England is concerned. The State has no supervision of our libraries, and there is no machinery, public or private, for focussing statistics so as to yield satisfactorily information like that which Signor Natoli gives of Italian libraries. Although in the size of our provincial libraries England may appear to hold an inferior position, it is perhaps more in appearance than in reality, for our town libraries are brought up to the demands of the age, in a much more efficient manner than on the continent, and there exists nowhere else so large a number of smaller libraries. The State has never, in Great Britain, recognised the duty of encouraging the systematic provision of good literature freely accessible to all classes, but private enterprise and private benevolence have done much to supply the deficiency. No society for educational or literary purposes, is considered complete without a library. Working men's clubs, temperance societies, night schools, scientific societies of every

The paper read before this Society twenty-two years ago was destined to be productive of great and speedy results. From the

description, think something wanting until they have accumulated a number of volumes chiefly bearing on the particular phase of thought or investigation which they affect. Thus, in the sister boroughs of Manchester and Salford, the public libraries endowed by Humphrey Chetham, the eight rate-supported libraries, the Royal Exchange, Portico, Law, Foreign, Medical, Athenæum, Schiller-Anstalt libraries, and those attached to the various literary and scientific societies, colleges, temperance societies, Sunday schools, circulating libraries, &c., will contain in the aggregate not less than 400,000 volumes. The Sunday School libraries alone claim 90,000 volumes, of which 25,532 volumes belong to the Church of England; 41,530 to the Congregationalists, or Independents; 9,547 to the Methodists; 7,820 to the Presbyterians; 2,512 to the Roman Catholics; and 10,254 to the Unitarians, Quakers, Bible Christians, and Swedenborgians. The largest of the libraries in connection with the schools of the Established Church (St. Paul's, Bennett Street), contains 3,300 volumes, and, from a partial analysis of the catalogue, it would appear that the books belonging to the great divisions of knowledge, are in the following proportion:—Of every 100 volumes, 43 belong to theology, 6 to mental philosophy, 34 to history, 4 to politics, 8 to science, and 5 are novels or light literature. About 300 of the volumes can only be consulted on the premises, and include the publications of the Parker and Ecclesiastical History Societies. There is in connection with the school a mutual improvement society, having a library of about 300 volumes. The proportions in this are, theology 6, philosophy 9, history 23, politics 5, science 3, literature 54 per cent. Their chief object, of course, will be the literature of the particular sect to which they belong, but due allowance being made for this circumstance, there can still be no question but that they are instrumental in circulating a large number of good books on unsectarian subjects. Nor is it in the large towns alone that we find numerous educational and library agencies at work. Few of the Lancashire villages are without schools and libraries of some description. If we turn to the little village of Royton, formerly (and still) noted for its democratic sympathies, we shall find that the divine hunger for knowledge has produced institutions, humble enough, and yet in some measure capable of satisfying that craving. The population of Royton in 1851 was 6,974; ten years later it had only increased to 7,437. In 1854 Mr. J. B. Horsfall, an inhabitant of the village, published a little pamphlet which gives an interesting account of its various literary institutions. From this we learn that "there are in Royton and "its vicinity eighteen newsrooms, libraries, and self-improvement societies. The "total number of books in the various libraries amount to more than 3,000 "volumes, which have been purchased by the united pence of more than 600 "members. Besides the above, there are the libraries, night schools, day schools, "and Sunday schools connected with the various places of worship. Of all the "youths and men over 16 years of age, there are very few who are not members "of some school or mutual improvement society." The most noticeable of these libraries is the Royton Botanical Society and Natural History Library, formed in 1794. The first president was the late John Mellor, one of the most eminent of those working men, students of science, of whom Lancashire is proud. Amongst the books in the library, Mr. Horsfall mentions "Hooker's Flora," "Lee's Botany," "Withering's Botany," "Woodville's Botany," "Macgillivray's Geology," "Goldsmith's Animated Nature," "Chambers's Chemistry," "Humboldt's Views of "Nature," "Vestiges of the Natural History of Creation," and various others of a similar character. The Royton Literary Institute was established in 1848 by nine factory lads who were anxious for self-improvement. These youths, by the aid of their weekly "twopences," had, in 1854, a newsroom open every night, and supplied with Manchester and other newspapers. Three nights in each week were devoted to scholastic purposes, and they had classes for reading, writing, arithmetic, grammar, music, &c. Besides a set of class books published by the Christian Knowledge Society, their library contained about 150 volumes of books. The

reading of it sprang the present system of free town-libraries. The seed was then sown, and it is now fructifying in the libraries which are springing up on every hand. The paper attracted the attention of the late William Ewart, Esq., M.P., and ultimately led to the appointment of a parliamentary committee on the subject of public libraries. The report of this committee paved the way for the Public Libraries Act of 1850. The provisions of that act and its various amendments are well known.

Several places have availed themselves of this liberty of taxing themselves for the maintenance of a public library. The largest and most important of the libraries hitherto established are those at Manchester, Liverpool, and Birmingham. Of these three institutions it is intended to give detailed information, derived either from the printed reports or from official communications. The remainder of the institutions will be treated more cursorily.

II.—*Manchester Free Library.*

The Manchester Free Library owes its existence to the public spirit of the late Sir John Potter, and its origin is thus narrated by Mr. Edwards:—"Sir John Potter began his chief public labour " (during the second year of his mayoralty) by taking from his " pocket one day, on the Manchester exchange, a library begging-book. He repeated the experiment soon afterwards in a place " where he was wont to feel himself more thoroughly at his ease " than even on the exchange, where his name had been so long held " in honour. At the head of a board well laden with the choicest of " the good things of this life, and surrounded by faces beaming with " testimony of the genial enjoyment of them, Sir John Potter was

Teetotal Society in Royton also performs educational duties. Established in 1842, it had in 1854 seventy members, who meet every night, and have classes for reading, writing, arithmetic, and grammar. They have a library containing about 300 volumes, besides atlases, globes, and an organ. The building in which they meet is their own property, and was built at a cost of about 400*l*. It is not every village that has made such efforts in the pursuit of knowledge under difficulties, but most of them have educational appliances of some nature.

The co-operative societies, also, which owe their existence to the spontaneous efforts of the working classes, nearly all perform educational functions, generally by means of a newsroom and library, but in some cases also by classes and lectures. The library of the Rochdale Pioneers contains over 6,000 volumes, and I have now before me a catalogue, printed in 1864, of the library in connection with the Sunderland Co-operative Society. It contains 960 volumes, and includes works by Carlyle, Howitt, Lamartine, Sismondi, Kingsley, Emerson, Helps, Bancroft, Jean Paul, Bremer, Landor, Lytton, Lewes, Leigh Hunt, Brougham, Mill, Spinoza, Browning, Tennyson, Theodore Parker, Hugo, Gibbon, Rollin, Goethe, Guizot, Mazzini, Smollet, Martineau, Sterne, Ruskin, Colenso, Swedenborg, Dudevant, Andersen, Thackeray, Scott, de Tocqueville, Dickens, Prescott, F. D. Maurice, &c. They have also most of the best English poets, and translations of the greatest of the Greek and Roman classics.

"always seen at his best. The enjoyment of the host seemed to increase with the number and the joyousness of the guests. Under such happy circumstances, the subscription list opened on the exchange went round the table with the wine, and was rapidly and liberally filled up."

The public subscription ultimately reached the sum of 12,823*l.* 10*s.*, including 823*l.* contributed by working men. With this sum, a building, formerly used as a Socialist Hall of Science, was purchased, adapted to library purposes, stocked with books, and presented to the corporation in trust for the inhabitants of Manchester. A poll of the inhabitants was taken as to the adoption of the Libraries Act, and of the four thousand four hundred and forty-two who cast their votes, only forty voted against it.

The promoters, having in view the fact that they were establishing a public library for a large and important centre of commercial activity, thought it would be wise to pay special attention to the literature of commerce and political economy generally, and at the opening day it had upon its shelves about 7,100 works of that class bound in about 3,000 volumes. They also made special efforts to collect all books and tracts illustrative of the civil, religious, commercial, and literary history of the locality. The number of these at the commencement was about 500, they now number more than 2,000 separate works. The number of books on the shelves at the opening is shown in the following table, and, to indicate the progress of the institution, in the next column is given the corresponding figures for 1868-69.

	1852.	1868-69.
Theology and philosophy	665	2,559
History, biography, &c.	6,707	11,530
Politics and commerce	2,705	6,929
Science and arts	1,310	4,082
Literature and polygraphy	4,626	11,067
Specifications of patents	—	3,965
Books and pamphlets not yet classified	—	1,363
Total	16,013	41,495

Note.—The lending library opened with 5,305 volumes. It has now 14,064; and four additional lending libraries have been opened in different parts of the city. The five lending libraries contain in the aggregate 50,860 volumes.

The number of volumes and their distribution are as follows :—

Class.	Reference Library.	Lending Libraries.					
		Camp-field.	Hulme.	Ancoats.	Rochdale Road.	Chorlton and Ardwick.	Total.
Theology and philosophy	2,559	565	327	294	261	337	4,343
History, biography, &c.	11,530	4,782	3,350	2,520	2,556	2,648	27,339
Politics and commerce	6,929	912	240	75	225	210	8,591
Science and arts	4,082	1,148	967	650	1,000	839	8,687
Literature and poly-graphy	11,067	6,683	5,518	4,810	5,042	4,817	38,054
Specifications of patents	3,965	—	—	—	—	—	3,965
Books and volumes of pamphlets not yet classified	1,363	—	—	—	—	—	1,363
Embossed books for the blind	—	24	13	22	48	27	134
Totals	41,495	14,064	10,415	8,371	9,132	8,878	92,355

The next table shows the aggregate—

Annual Issues from each Library in each Year since the Opening.

Year.	Reference Library.	Lending Libraries.	Total Libraries.	Daily Average of the Aggregate Issue.
1852-53	61,080	77,232	138,312	461
'53-54	64,578	77,767	142,345	488
'54-55	66,251	81,321	147,582	495
1855-56	70,770	85,783	156,553	523
'56-57	101,991	96,117	198,108	666
'57-58	122,772	186,358	309,210	1,131
'58-59	115,206	190,308	305,514	1,036
'59-60	123,084	200,745	323,829	1,250
1860-61	142,433	266,585	409,018	1,371
'61-62	160,496	310,190	472,686	1,579
'62-63	124,065	318,280	459,044	1,536
'63-64	108,237	297,707	414,873	1,401
'64-65	112,026	318,210	430,236	1,433
1865-66	133,056	295,506	428,562	1,485
'66-67	194,349	480,083	674,432	2,302
'67-68	262,446	547,238	809,684	2,772
'68-69	318,563	555,085	873,648	3,088
Total from the opening	2,261,413	4,381,865	6,690,636	—

It will be seen that from the commencement the Manchester library was divided into a reference and a lending library, each having a distinct aim. The reference library was intended to place at the disposal of every student, rich or poor, the best books in the various domains of human thought, whilst the lending library was intended to be of a more popular character, and whilst containing elementary books of a scientific nature, consisted chiefly of works of history, poetry, and fiction, including serviceable editions of nearly all the greater English writers. The reference library is particularly rich in works relating to English history and in the varied literature of political economy. The political tracts include the best part of the celebrated Magen's collection, and also those of Lord Bexley, Francis Place, William Davies of Oxford, and William Fullerton of Carstairs. Amongst the numerous additions of this class recently made is a copy of Penris's "Answer to Bancroft," one of the scarcest of the Marprelate Tracts. The library has no MSS. of any importance, but possesses a few early printed books, and some of those curiosities dear to bibliomaniacs. Amongst these we may include Caxton's translation of Viragone's "Golden Legend," 1482; the Ulm edition of Caoursin's "Descriptio Rhodii;" the rare edition of Faerno's "Fabulæ," Romæ, 1586; Mary Pope's "Treatise of Magistracy;" the curious French translation of "Utopia," published by Guendeville, in 1719; Lycosthenes "Prodigiorum," 1557, &c. Of costly illustrated books may be named Kingsborough's "Mexican Antiquities," Silvestre's "Paleographie Universelle," Du Sommerard's "Arts au Moyen Age," a fine set of Pugin's architectural works, the "Vetusta Monumenta," and the botanical works of Blume, Wallich, Arrabida, Hooker, Curtis, and Sowerby. Amongst the works on botany the early herbals of Gerard, Dodoens, Parkhurst, and Tournefort are worth mentioning. There is an extensive series of Bibles, extending to about 300 volumes; amongst the more curious volumes of this series are the Jews' Bible, printed at Ferrara in 1553; the Greek Testament of Colinæus, Paris, 1534; the still rarer English version, supposed to have been printed at Antwerp in 1539; a republican copy of Walton's Polyglot. In 1864 a catalogue of the reference library was printed, it forms an octavo volume of nearly a thousand pages, and contains a record of 26,534 distinct works. The compiler, Dr. A. Crestadoro, the present chief librarian, has arranged the entries alphabetically, and has subjoined to it an index of subjects on the same method as that of the well-known Index to the British Catalogue. An examination of this catalogue will show that the library has many rare and valuable works, and offers to the inhabitants of Manchester appliances for study and research such as the richest citizen could scarcely hope to bring together for his own

use in a lifetime. That the people of Manchester have not been slow to appreciate the advantages thus offered, will be seen by the following table, which shows how, year by year, the library of consultation has become more and more appreciated.

Year.	Theology.	Philosophy.	History.	Politics.	Science.	Literature.	Patents.	Total.
1st	1,184	1,569	22,864	2,328	8,618	24,517	—	61,080
2nd...	1,348	1,417	20,538	2,395	8,578	30,302	—	64,578
3rd....	1,394	1,382	18,867	3,609	9,279	31,730	—	66,261
4th....	2,153	970	17,310	2,877	10,427	33,301	3,732	70,770
5th....	2,218	1,453	21,384	4,777	9,364	41,918	20,877	101,991
6th....	3,395	1,751	24,642	4,206	10,922	49,929	27,837	122,682
7th....	3,317	866	16,272	4,703	9,035	41,041	39,972	115,206
8th....	3,825	1,174	18,585	5,560	10,585	54,114	29,241	123,084
9th....	4,679	1,346	18,519	6,682	11,766	68,338	31,103	142,433
10th....	3,700	1,478	19,134	8,797	13,968	78,759	36,660	162,496
11th....	3,315	1,208	18,977	7,104	14,115	72,972	22,893	140,584
12th....	2,315	843	10,542	11,277	12,167	47,795	32,227	117,166
13th....	2,374	851	15,812	5,883	10,970	47,956	28,180	112,026
14th....	2,809	639	14,479	5,139	10,565	47,211	52,214	133,056
15th....	2,875	953	21,423	8,284	14,043	60,227	86,544	194,349
16th....	3,930	1,220	22,560	9,990	18,656	66,028	140,062	262,446
17th....	3,289	1,253	24,512	13,835	16,689	66,665	192,320	318,563
Total...	48,120	20,373	326,420	107,446	199,747	862,803	743,862	2,308,771

The class literature and polygraphy groups together books of a varied nature, and without some explanation might lead one to form an erroneous estimate as to the real character of the books used in the reference library. It includes the literary histories of all countries, poets, dramatists, essayists, &c.; bibliographical works, encyclopædias, grammars, dictionaries, and periodicals of all descriptions, from the "Philosophical Transactions" to the "Anti-Tobacco Journal."

Fiction is very sparingly introduced into the reference library, scarcely more than 200 out of the entire 40,000 are novels, and of that small number many are standard classical works, Fielding, Smollett, Scott, Le Sage, Cervantes, and some—"The Voyage de "Nicolas Klimius dans le monde souterrain" for instance—which would have few charms for a modern romance reader.

Some particulars as to the ages and occupations of the readers in the reference library are given in the thirteenth report.

From the same report we learn that in 1864-65, 62,597 of the readers resided in Manchester and Salford, 5,666 in other parts of Lancashire, 3 in Bedfordshire, 849 in Cheshire, 124 in Derbyshire,

2 in Devonshire, 2 in Durham, 3 in Leicestershire, 83 in London, 3 in Norfolk, 5 in Shropshire, 3 in Staffordshire, 6 in Birmingham, 1 in Kidderminster, 139 in Yorkshire, 5 in Ireland, 8 in Scotland, 4 in Wales, and 6 in America!

The lending libraries have been equally successful, as the following table of the issues from them in 1868-69 will show:—

Monthly Issues and Daily Average for the Lending Libraries during each Month of the Year.

Year ended 5th September.	Lending Libraries.									
	Campfield.		Hulme.		Ancoats.		Rochdale Road.		Chorlton and Ardwick.	
	During the Month.	Daily Average.	During the Month.	Daily Average.	During the Month.	Daily Average.	During the Month.	Daily Average.	During the Month.	Daily Average.
Sept. ..	7,105	338	9,300	490	4,205	201	6,390	304	10,384	459
Oct.	9,932	368	15,092	604	5,686	237	8,724	323	11,218	509
Nov.	8,287	414	14,947	679	6,251	250	7,928	360	14,017	560
Dec.	9,382	360	14,774	642	6,657	256	9,078	349	14,577	560
Jan.	10,463	419	17,333	693	6,578	299	9,418	377	13,333	606
Feb.	7,169	341	16,869	703	6,692	279	8,590	409	14,795	616
March ..	8,642	332	16,129	645	7,132	274	9,714	374	14,380	553
April ..	8,167	314	13,814	576	4,678	203	8,592	330	11,234	488
May	6,290	273	12,169	468	5,267	208	5,037	267	10,297	396
June ..	7,391	284	12,035	481	5,123	198	7,641	294	10,680	410
July	6,605	254	11,431	476	4,558	198	6,342	288	9,138	397
Aug.	7,417	322	9,392	552	4,915	189	7,350	319	11,613	446
Sept. ...	1,101	275	2,017	504	702	175	1,216	304	1,702	425
Total ..	97,951	333	165,302	584	68,444	232	96,020	332	147,368	501

Attached to each lending library is a newsroom, well supplied with London and local papers, magazines, pamphlets, &c., all accessible without any formality whatever. Any person desiring to read a book in the room can be supplied with one, on filling up a ticket containing the title of the book he desires and his own name and address. Should he desire to borrow books for home reading, he can do so on obtaining the signature of a municipal or parliamentary elector of Manchester or Salford. The class of books read will be best understood from the next table, which shows the number of volumes in each class issued to borrowers for home reading, and to readers for perusal in the newsroom, at each lending library, during the year 1868-69.

Class.	Campfield.				Hulme Branch.			
	Lending Library.		Newsroom.		Lending Library.		Newsroom.	
	Volumes.	Bor- rowers.	Volumes	Readers.	Volumes.	Bor- rowers.	Volumes	Readers.
Theology	1,591	1,472	9	9	1,530	1,506	294	286
Philosophy	273	201	3	3	174	170		
History	12,549	10,017	254	252	14,450	14,119	2,224	2,173
Politics	723	632	329	322	536	510	372	365
Science	4,437	3,983	85	84	4,860	4,258	1,422	1,389
Literature	72,799	62,544	4,870	4,826	102,133	73,812	37,742	36,006
Embossed books for the blind }	29	29	—	—	65	65	—	—
Total	92,401	78,878	5,550	5,496	123,248	94,440	42,054	40,219
Daily average....	314	268	19	19	435	334	148	142

Class.	Ancoats Branch.				Rochdale Road Branch.	
	Lending Library.		Newsroom.		Lending Library.	
	Volumes.	Borrowers.	Volumes.	Readers.	Volumes.	Borrowers.
Theology	727	657	27	25	1,768	1,474
Philosophy						
History	7,653	6,193	394	295	12,321	8,758
Politics	127	115	2	2	562	470
Science	2,263	2,005	110	97	3,377	2,795
Literature	51,516	43,444	5,623	5,518	70,947	57,123
Embossed books for the blind }	2	2	—	—	68	40
Total	62,288	52,416	6,156	5,937	89,043	70,660
Daily average....	210	177	21	20	308	245

Class.	Chorlton and Ardwick Branch.			
	Lending Library.		Newsroom.	
	Volumes.	Borrowers.	Volumes.	Readers.
Theology	1,915	1,863	663	652
Philosophy				
History	10,259	9,890	2,322	2,297
Politics	1,230	1,214	571	560
Science	3,306	3,229	1,471	1,458
Literature	93,834	86,230	31,777	28,170
Embossed books for the blind....	20	20	—	—
Total	110,564		36,804	33,137
Daily average	376	348	125	116

It will thus be seen that each lending library is also, as far as its resources will allow, a reference library. This is a still recent innovation, and it is not yet possible to say what will be its development.

“ With reference to the borrowers’ occupations and descriptions, 117 are clergymen, ministers, and missionaries; 1,066 represent literary men, architects, surgeons, solicitors, sculptors, artists, civil engineers, and other liberal professions; 462 are school-masters and schoolmistresses; 3,575 school boys and school girls; 3,443 merchants, traders, and agents; 229 employers of manufacturing, agricultural, and other industrial labour; 10,850 artisans, mechanics, working men, and labourers; 5,245 engaged in various public and private situations; and 3,250 ladies.”*

From the last annual report we obtain the following summary of one year’s work at the Manchester free libraries.

“ A desire has been expressed by persons who have seen our newsrooms so well frequented in the day and crowded in the evening, that a detailed account of this important branch of the free libraries system should be prepared, and it is obvious that without this the annual report is imperfect. For this reason it has been thought advisable to ascertain, with the greatest approach to accuracy, the use which the public make of these rooms. The returns which have been obtained show that in Manchester, with a population of 338,722, there have been during the year in the free libraries 2,172,046 readers, of whom 398,840 are borrowers of books for home reading; 74,367 (including 228 ladies) are readers in the reference library; 91,201 are readers to whom books have been issued on their signature in the branch reading-rooms; and 1,607,638 avail themselves of reading the current periodicals, books, pamphlets, and other publications in the newsrooms, for which no signature is required.

“ During the last year the number of these different publications has been 1,151, representing 593 books and pamphlets, and 45,478 current numbers of daily, weekly, monthly, and quarterly periodicals. All the reading-rooms together can accommodate 791 persons. The number of readers actually present at one time has very often in the evening exceeded that limit, and amounted to 1,031, being 240 in excess of the number that can be conveniently accommodated.

“ The aggregate annual issues have increased from 807,664 to 893,648; consisting of 477,544 volumes issued to borrowers; 97,541 volumes issued in the newsrooms; 126,243 volumes issued in the reference library; and 192,320 specifications of patents.

* Sixteenth Report.

" These issues do not include the periodicals and books which lie on the stands and tables, and are constantly in use; so that by taking into account a minimum rate of one perusal of only a single paper for each reader in the newsrooms, the ultimate amount of actual circulation cannot be represented by a less number than 2,501,286.

" The names of borrowers on the registers amount to 35,336 against 27,749, the number at the date of the last report, being an increase of upwards of 25 per cent. The number of volumes added to the library during the year has been 8,832 by purchase and 557 by donation; total 9,389 volumes. During the same period 1,594 volumes have been withdrawn as worn out by constant circulation, and of this number 653 volumes have been replaced. 176 volumes have been lost or damaged; of these 151 have been replaced or paid for by borrowers, 23 by the guarantors, and for the remaining two repayment is expected. The net total number of volumes in the libraries, after allowing for books replaced and for books lost, is 92,355 against 86,444 at the date of the last report. Of the total present number 41,495 volumes are in the reference, and 50,860 in the lending, department. Out of the 45,478 current numbers of periodicals in the newsrooms, which have been used about two millions of times by people of all classes, 65 have been abstracted or pieces cut out while in use, representing a value of 7s. 7½d. The total number of volumes bound during the year is 3,609."

The expenditure for the year 1868-69 amounted to 5,000*l.* 10*s.* The particulars are thus given in the Proceedings of the Manchester City Council.

	£	s.	d.
Salaries and wages	1,591	15	9
Books	818	1	11
Bookbinding	588	9	7
Rents, rates, taxes, and insurance	88	9	—
Interest on loans and liquidation of debt.....	970	—	—
Periodicals	372	8	6
Printing.....	173	11	—
Catalogues.....	50	—	—
Alterations, repairs, and furniture	167	7	9
Coals, gas, and water	310	1	10
Miscellaneous expenses	90	15	2
	5,112	11	6
Deduct sundry casual receipts	112	1	6
	5,000	10	—

In the next table is given the annual expenditure of the library,

and the difference between that expenditure and the amount legally available :—

Yearly Expenditure since Opening of the Manchester Library.

Date.	Rate.	Expenditure.	Net Amount of Rate.	Difference below the Rate, showing the Amount not Levied.
	<i>d.</i>	£	£	£
1852-53	$\frac{1}{2}$	698	1,951	1,253
'53-54	"	1,793	2,040	247
'54-55	"	1,935	2,097	162
1855-56	$\frac{1}{2}$	2,116	2,114	—
'56-57	"	1,747	2,103	356
'57-58	1	3,566	4,257	691
'58-59	"	3,230	4,300	1,070
'59-60	"	3,883	4,347	464
1860-61	1	2,446	4,417	1,971
'61-62	"	3,560	4,587	1,027
'62-63	"	3,660	4,625	965
'63-64	"	3,270	4,682	1,412
'64-65	"	3,658	4,799	1,141
1865-66	1	3,816	4,907	1,091
'66-67	"	4,897	5,082	185
'67-68	"	4,534	5,348	814
'68-69	"	5,000	5,696	696
Less annual appropriations to museum of 350 <i>l.</i> since 1863	—	—	—	13,545
	—	—	—	2,100
Total amount not levied	—	—	—	11,445

III.—Liverpool Free Library.

The Liverpool library was established under powers given by a special local act of Parliament, passed in 1852. An appeal to the public brought in only 1,389*l.* and 4,000 volumes of books. No sooner was it organised and opened to the public than its success became assured, and it commenced that career of usefulness which have made it one of the proudest boasts of Liverpool. The institution did not attain its present proportions until 1860. The late Sir William Brown, Bart. (then William Brown, Esq., and head of the great firm of Brown, Shipley, and Co.), in 1856, undertook the sole cost of erecting a building for "a free public library and museum worthy of the town, where the inhabitants, be their position in life what it may, can resort for intellectual improvement." The foundation stone of the new building was laid on the 15th of April, 1857, and was formally opened to the public on the 18th

of October, 1860. That day was a red-letter one in the annals of Liverpool; the late venerable Lord Brougham, Sir John Bowring, and other persons of eminence took part in the proceedings, and it was calculated that 400,000 persons were spectators of some portions of the proceedings. The building (which is said to have cost its donor 40,000*l.*), is one of the most interesting in Liverpool. The museum is now a large and important one, probably the finest in the provinces. The liberality of the Earl of Derby, who bequeathed to the town his fine museum of natural history, has been emulated and surpassed by Joseph Mayer, Esq., F.S.A., who has presented to the museum his own collection of antiquities, so long known to the archæologist as the Mayer Museum. It is impossible to give here any adequate idea of the value and interest of this museum, which had required the loving labour of many years to bring together. It is rich in many departments; Wedgwood ware and Liverpool crockery, Anglo-Saxon gems, missals, Egyptian papyri, Burmese bronzes, and objects of interest and antiquity from all quarters of the globe. The collection of Anglo-Saxon gems is considered to be unique in its character; and a high authority says, that "the collection of Egyptian antiquities is one of the most remarkable and extensive in existence, and contains many unique specimens of art."

A full and highly interesting account of this remarkable portion of the Liverpool institution is now appearing in the "Art Journal," from the pen of Llewellynn Jewitt, Esq., F.S.A. The rooms devoted to natural history are almost as interesting to the naturalist as the portion just named is to the antiquarian, and with the general public will no doubt be considered much more attractive. The museum has grown up and attained its present position under the direction of Mr. Thomas J. Moore, corresponding member of the Zoological Society, London, and a well known contributor to the zoological journals. From the last annual report we obtain the following information as to the extent to which the museum is frequented:—

	1867-68.	1868-69.	Increase in 1868-69.
Day visitors	424,347	462,892	38,545
Evening visitors	39,504	44,000	4,496
Total	463,851	506,892	43,041
Average of day visitors.....	1,992	2,163	171
„ evening visitors	1,519	1,760	241
Greatest attendance in one evening.....	2,037	2,929	—
Smallest „	470	813	—

Compared with the average of six years, the total number of visitors in 1868-69 is above 50,000 in excess, as shown by the following figures:—

Total number of visitors in 1868-69	506,892
Average of the six years preceding 1868-69	455,603
Excess in 1868-69	51,289
<hr/>	
Total number of visitors in 1868-69	506,892
Greatest number in any previous year (1866-67)	505,993
Excess in 1869 over any previous year	899

The total number of visitors to the museum from its inauguration at William Brown Street, on the 18th of October, 1861 amounts to more than three-and-a-half millions of people, thus:—

To 31st August, 1862	321,714
" '63	427,412
" '64	488,123
" '65	462,648
" '66	385,596
" '67	505,993
" '68	463,851
" '69	506,892
Total	3,562,229

Leaving the museum, let us now turn our attention to the reference library now containing 49,277 volumes. The table shows the number of books in each class in the years 1853 and 1869 respectively:—

	1853.	1869.
Theology, morality, and metaphysics	770	4,027
Natural philosophy, astronomy, chemistry, &c.	484	1,232
" history, botany, mineralogy, &c.	482	2,677
Science and the arts, architecture, painting, music, &c.	440	5,195
History and biography	1,877	7,141
Topography and antiquities	584	2,209
Geography, voyages, and travels	996	3,120
Miscellaneous literature	2,339	8,993
Jurisprudence, law, and politics	2,791	4,245
Commerce and political economy	80	448
Education, rhetoric, logic, and language	131	734
Poetry and dramatic literature	721	2,224
Novels and romances	1,296	5,116
Classical literature	53	317
Encyclopædias, gazetteers, heraldry, and books of reference....	409	1,599
Total	13,456	49,277

The library is a well selected collection, chiefly of modern books,

and is considered to be particularly rich in the best English and Foreign works on art, natural history, and philology. Particular attention is given to local history, of which there is an ample collection of materials. I have elsewhere named, as especially worthy the attention of the historian or antiquary of the county palatine, the work entitled "Illustrations of Lancashire," a long series of drawings, maps, portraits, &c., illustrative of local history, collected by Thomas Binns, and extending to thirty folio volumes. The magnificent illustrated works of Audubon, Gould, Catlin, Bonaparte, Cuvier, Botta, Layard, may also be named; nor should we forget the "Description de l'Egypte," of which great work the library possesses the copy which formerly belonged to Louis Philippe.

The next table is a statistical history of the reference library, and shows the number of volumes which have been issued to readers in each class since its foundation:—

Table showing the Issues of Books in the Reference Library, Liverpool, from 1853 to 1869 inclusive.

Description of Work.	Total Issue in Seventeen Years.	Whereof was Issued in	
		1853.	1869.
Theology, morals, and metaphysics.....	178,090	4,071	17,398
Natural philosophy, astronomy, chemistry, &c.	172,866	3,577	16,849
„ history, botany, mineralogy, &c.	71,906	1,903	7,003
Science and the arts, architecture, painting, } music, &c.	307,375	2,808	36,462
History and biography	419,287	13,369	37,925
Topography and antiquities	85,921	1,848	11,453
Geography, voyages, and travels	302,247	7,433	30,735
Miscellaneous literature	1,513,035	10,208	215,953
Jurisprudence, law, and politics	43,045	739	5,235
Commerce, political economy, and social statistics	32,658	394	3,624
Education, logic, language, &c.	111,197	1,018	11,422
Poetry and dramatic literature	1,966,550	5,770	23,197
Works of imagination	237,629	56,224	194,410
Classical literature.....	30,863	291	3,517
Heraldry, encyclopædias, and works of reference	89,645	2,070	9,437
Total	5,562,314	111,723	624,619

The yearly number of volumes issued from 1853 to 1869, are shown by the following figures:—

1853	111,723	1862	456,372
'54	98,760	'63	472,010
'55	131,912	'64	420,590
'56	153,169	'65	420,127
'57	166,246	'66	472,102
'58	195,453	'67	578,774
'59	202,534	'68	565,344
'60	195,962	'69	624,619
'61	297,417		

This table, if examined, will exhibit the striking and gratifying progress of this library. The 4,071 volumes relating to theology and metaphysics issued in the first year have increased to 17,398 in the seventeenth; the 291 volumes of classics have grown to 3,517; instead of the 394 volumes of politics issued in 1853, 3,624 were issued in 1867. In every class the increase is enormous. It is pleasant to see the increased demand for educational and scientific works. The presence in the same building of a fine museum might have been expected to stimulate the study of natural history, but this does not appear to have been the case to any great extent. The number of volumes issued in 1869 was 7,003, a great advance upon the 1,903 consulted in the first year, is not so proportionately large an increase as might have been expected from the proximity of the natural history collections. The scientific and artistic books issued in 1853 numbered 2,808 volumes, and in 1869, 36,462.

The treasures of art and antiquity contained in the Mayer Museum ought to send many visitors to the reading room in search of information respecting them. The only matter for regret is the large amount of novel reading. No doubt the custom of publishing novels in three volumes may tend to unduly raise the figures, no doubt also the class of fiction will be of a high character, but one could wish to see the novel at the bottom of the poll instead of triumphantly taking precedence of the scientific manual and the political treatise.

There are two lending libraries, one at the north and the other at the south end. The statistics for the last year are thus tabulated:—

	North Library.	South Library.	Total.
Number of volumes lent	214,519	224,420	438,939
Total number of volumes in the libraries	19,527	19,952	39,479
Number of volumes added	487	514	1,001
" worn out and replaced	968	613	1,581
" " withdrawn	169	430	599
" lost or injured, and paid for, or replaced by borrowers }	17	33	50
Books wholly lost to the libraries	8	9	12
Number of new tickets issued	2,185	2,307	4,492
" tickets renewed	1,863	2,254	4,117
" cancelled	2,054	1,981	4,035
" readers on the books	4,056	4,561	8,617

The increase in the number of volumes lent out for home reading is very great, as will be seen by the following classified statement of the issues from the two lending libraries in the years 1854 and 1869 respectively:—

	1854.	1869.
Theology, morals and metaphysics	858	9,750
Natural philosophy	777	3,973
" history	590	2,911
Science and the arts	634	10,972
History and biography	5,741	23,466
Topography and antiquities	264	1,745
Geography, travels, and adventure	2,588	10,249
Miscellaneous literature (principally magazines)	3,384	40,118
Jurisprudence, law, and politics	107	711
Commerce, social science, and political economy	104	1,320
Education, rhetoric, logic, and language	102	4,288
Poetry and the drama	886	4,194
Light literature	19,808	324,650
Latin and Greek classics and translations	135	322
Embossed books for the blind	—	270
Total volumes.....	35,978	438,939

In the second annual report there are some remarks upon the class of books most read by the borrowers from the lending libraries, from which the following paragraph is copied: "Many persons commence reading a work in several volumes, but comparatively few go right through; for instance, one copy of 'Gibbon's Rome,' the earlier volumes lent twenty-eight times, while later ones have only been lent three times; 'Rollin's Ancient History,' first volume seventeen readers, the eighth three; while, on the other hand, there are many carrying on a consecutive course of reading evidently with a view to improvement. A labouring man in the north district has read, since the library opened, 'Gibbon's Rome,' 'Universal History,' 'Macaulay's England,' and is now going through 'Lingard,' as he says, 'he wishes to know both sides of the question.' Another in the same district has read Macaulay, the 'Universal History,' and is now reading Alison. At the south, two working men have read Moore's and Scott's 'Poetical Works,' and one Byron. Another has read 'Rollin's Ancient History,' and is at present going through Alison. A poor man, at the extremity of Toxteth Park has been reading ever since the library opened the 'Mirror,' he has now reached the thirty-third volume. To obtain this one book it is calculated he has already walked upwards of one hundred miles.

"It is a noticeable fact, that the larger proportion of solid reading is among the really working classes, the lighter literature more among young men in offices and shops."

The experience of Liverpool as to the relative literary tastes of the artisans and of those immediately above them in the social scale, is curiously corroborated by the results of an inquiry instituted on this point at Cardiff as narrated at p. 358 of this paper.*

* See also Tables I and II in Appendix for some further details as to the Liverpool libraries.

IV.—*Birmingham Free Library.*

In some respects the history of free libraries in Birmingham presents far more noticeable features than elsewhere. Here far more is due to corporate action than elsewhere, for, with one notable exception, the donations have been comparatively few, and the library has been, to a greater extent than any other, bought from the rates. There is now a reference library and four lending libraries, containing in the aggregate 52,269 volumes. This is a large number to have been accumulated in eight years. Their disposition is as follows :—

	Theology, Ecclesiastical History, and Moral Philosophy.	History, Biography, Voyages, Travels.	Law, Politics, and Commerce.	Arts, Sciences, and Natural History.	Miscellaneous, including Poetry, the Drama, Fiction, Periodicals, &c.	Juvenile Books.	Patents.	Total.
Reference library*	1,897	5,666	1,237	4,092	8,845	—	2,476	24,213
Central lending	355	2,287	100	806	7,754	316	—	11,618
Constitution Hill	221	1,638	90	585	2,484	205	—	5,223
Deritend	138	1,476	44	284	2,642	43	—	4,627
Gosta Green	266	1,099	43	420	2,441	116	—	4,385
Adderley Park ..	148	422	22	181	1,480	—	—	2,203
Total	3,025	12,588	1,536	6,318	25,646	680	2,476	52,269

* Includes the Shakespeare library.

The extent to which they have been used during the year is shown in the next table :—

	Theology, Ecclesiastical History, and Moral Philosophy.	History, Biography, Voyages, Travels.	Law, Politics, and Commerce.	Arts, Sciences, and Natural History.	Miscellaneous, including Poetry, the Drama, Fiction, Periodicals, &c.	Juvenile Books.	Patents.	Current Periodicals.	Total.
Reference library* ..	8,793	13,449	2,008	14,284	23,354	—	4,464	61,888	128,240
Central lending ..	3,055	16,073	395	6,312	134,521	8,417	—	—	168,773
Constitution Hill†	142	2,935	140	1,309	14,814	—	—	—	19,340
Deritend	774	6,096	136	1,154	37,053	1,296	—	—	46,509
Gosta Green	1,573	7,252	129	1,938	46,792	4,028	—	—	61,712
Adderley Park	32	232	4	40	3,389	—	—	—	3,697
Total	14,369	46,037	2,812	25,037	259,923	13,741	4,464	61,888	428,271

* Includes the Shakespeare Library.

† Closed three months.

The reference library is no fortuitious conglomeration of books, but a carefully chosen collection of 24,213 volumes, selected in accordance with the plan thus indicated :—

“ I. That the library should, as far as practicable, represent every phase of human thought and every variety of opinion.

“ II. That books of permanent value and of standard interest should form the principal portion of the library, and that modern books of value and importance should be added from time to time as they are published.

“ III. That it should contain those rare and costly works which are generally out of the reach of individual students and collectors, and which are not usually found in provincial or private libraries.”

The books, which are almost exclusively modern, include the Benedictine edition of the “*Fathers*,” Montfaucon’s “*L’Antiquité Expliquée*,” Gruner’s “*Decorations de Palais et d’Eglises en Italie*,” Canina’s “*Edifizj di Roma Antica*,” “*España Artistica y Monumental*,” “*Antiquities de l’Empire de Russie*,” Champollion’s “*Monumens de l’Egypte et de la Nubie*,” “*Chronicon Nurembergense*,” 1493, and many other large and valuable works on art and antiquity. The sixth report contains a significant notice of the removal from the reference library of 491 volumes, “chiefly fiction, which it was found desirable to send to the lending libraries.” Accordingly the reference library does not contain even the *Waverley Novels*, nor one of the fictions of Dickens and Thackeray. These are liberally provided in the lending libraries, and the rule will have the effect of freeing the consulting library of those who read only for amusement, and will give the librarian and his assistants all the more time to aid those who study with a purpose. The catalogue of the reference library, compiled by J. D. Mullins, Esq., the present accomplished librarian, is carefully drawn up, and will be of great service to the readers, since it gives in one alphabet references to subjects and authors, and also groups together works of the same class in a manner that secures many of the advantages of a classed catalogue whilst retaining the simplicity of what has been termed the dictionary plan.

But the Birmingham library contains one collection which will specially interest most visitors. This is the Shakspeare Memorial Library, which now contains 2,249 volumes, illustrative of the teachings of England’s greatest son. The collection has the second, third, and fourth of the early folios, but no separate quarto play earlier than 1608; of the modern Shaksperiana of England, France, Germany, &c., there is a long and interesting series.

The wise liberality of the Birmingham Town Council has been repaid by the yearly-increasing extent of the work performed by

the libraries, and all classes of the community have participated in the benefit in even a more marked manner than elsewhere. Mr. Mullins, in the last report, has given a list of the books most in demand, and it is one well worth examining.

The issues in the *reference* library since its opening are given in the next table :—

	1866 (54 Days).	1867.	1868.
Theology, ecclesiastical history, and moral philosophy	826	4,472	6,063
History, biography, voyages and travels, &c.	2,404	9,425	11,772
Law, politics, and commerce	176	1,097	1,463
Arts and sciences	2,041	7,976	12,474
Miscellaneous	4,079	15,023	20,880
Patents	1,942	6,640	115,650
Current periodicals	—	—	56,457
Total	11,468	44,633	527,514

In the *lending* libraries the issues since their establishment have been as follows :—

	1862.	1863.	1864.	1865.	1866.	1867.	1868.	1869.
Central Lending Library (opened Sept., 1865)	—	—	—	—	164,120	156,553	176,004	168,773
Constitution Hill Library	108,057	118,863	130,520	112,557	36,747	40,864	34,014	19,340
Deritend Library (opened October, 1866)	—	—	—	—	8,622	57,633	47,979	46,509
Adderley Park Library (opened January, 1864)	—	—	2,558	18,351	9,883	7,104	6,523	3,697
Gosta Green (opened June, 1868)	—	—	—	—	—	—	38,285	61,712
Total	108,057	118,863	133,078	130,908	218,872	262,154	302,806	428,271

The quality of the reading in the lending libraries will be best seen by a statement of the issues in each class at the Constitution Hill Library since its opening in 1862. This library is selected as being the first established.

	1862.	1863.	1864.	1865.	1866.	1867.	1868.	1869.
Theology and philosophy }	1,641	1,102	1,199	1,012	250	352	319	142
History	27,298	30,541	30,995	25,697	3,925	4,802	5,057	2,935
Politics	1,338	575	554	475	141	170	165	140
Arts and sciences }	7,866	7,157	7,313	5,070	1,060	1,100	1,519	1,309
Miscellaneous..	69,914	79,488	90,459	80,296	31,371	34,440	26,954	14,814
Total	108,057	118,863	130,520	112,557	36,747	40,864	34,014	19,340*

* Closed three months.

As might be expected, the opening of additional libraries lessened the strain upon the Constitution Hill library.

V.—Salford Free Library and Museum.

Similar statistics might be given of other important town-libraries. Bolton, Sheffield, Birkenhead, Cambridge, &c., each exhibit a record of success. There is only space here for a brief account of the Salford library, which was opened whilst Mr. Ewart's committee was yet sitting. One of the members of the parliamentary committee was the late Joseph Brotherton, Esq., M.P. for Salford. Brotherton was an aider in all good works, he was of singularly abstemious habits (being a water drinker and a vegetarian), and possessed a capacity for labour truly remarkable. Convinced by the evidence brought before the committee of the existing want, he determined to make an effort to supply it, in the case of the town with which he was connected. He succeeded in enlisting influential helpers, and in 1850 a museum and library was opened in the borough of Salford under the provisions of the Museums Act of 1845. Peel Park, in which it is situated, is one of the favourite promenades in the neighbourhood of Manchester, and the museum is a continual source of attraction to the dwellers in the cotton districts, who in holiday time invade it by thousands. The contents of the library are thus stated in the last issued report:—

Reference library	15,098
Patent „	2,223
Lending „	10,588
Blue books and duplicates	3,800
	<u>31,779</u>

The extent and character of the reading at the Salford library, will be seen from the following statement :—

	Reference Library.	Lending Library.
Theology	1,346	651
Political and social economy....	1,293	—
History and biography	7,913	4,867
Science and arts.....	12,397	1,706
General literature	31,152	5,094
Novels.....	5,336	48,795
	59,437	61,113

Table III (Appendix) will give briefly the information about the remaining British town-libraries, which is likely to be needed. The limits of the space at command forbid me to devote to each that separate consideration which might otherwise be desirable. Where not otherwise stated, the figures give the monthly average issue, generally, for the year 1868.

VI.—Continental Free-Town Libraries—France.

We have already mentioned the foundation of the first town-library of Aix in 1418. Many other French towns possess collections of considerable extent; thus the Rouen town-library contains of printed books and MSS., 112,355 volumes. This town had the good fortune to receive from M. Coquebert de Montbret, in 1847, the magnificent bequest of a library of printed books extending to nearly 60,000 volumes. The average number of readers at Rouen is fifty daily.

Grenoble has a library of 81,000 volumes, the commencement of which was a public subscription to buy the library of their deceased bishop. "The faculty of advocates belonging to the parliament of Grenoble, joined in the foundation of the new institution by giving to the town their own library; and they laid an impost on themselves in order to provide a liberal endowment fund for future purchases. The king—that he too might have a worthy part in an institution of which the beginnings were so eminently marked by public spirit—gave copies of the splendid series of publications issued from the royal printing office of France. After the Revolution of 1789, the most precious of the printed books and MSS. of the celebrated monastery of the *Grande-Chartreuse* were added to the collection thus founded. Amongst these Carthusian acquisitions, a series of printed

"incunabula, originally formed by a collector who was himself the contemporary of Faust, Gutenberg, and Schoiffer, is remarkable."*

The statistics as to the town-libraries of France are not very definite, and give no clue as to the class of persons reading, or the class of books read. The number of persons making use of them is small when compared with the number of those who frequent English libraries of a similar nature. The following table, an amalgamation of *two* prepared by Mr. Edwards, give some examples of the more important of the town-libraries:—

	Population, 1861.	Aggregate Number of Volumes in the Town-Library, 1865, including MSS.	Average Daily Number of Readers.
Lyons	318,805	121,500	70
Bordeaux	162,750	123,320	70
Rouen	102,649	111,355	40
Toulouse	93,379	50,700	140
Strasbourg	82,014	181,589	50
Amiens	58,780	53,600	40
Besançon	46,786	81,500	40
Avignon	36,081	61,200	18
Versailles	43,899	56,039	20
Grenoble	34,726	81,500	32
Aix	27,659	96,062	25
Troyes	34,613	103,000	25
Poitiers	30,563	23,089	12
Havre	74,336	23,605	50
Bourges	28,064	20,310	10
Niort	20,831	21,021	6
Blois	20,331	20,010	12
Pau	21,140	20,000	40
Bastia	19,304	20,012	25
Saintes	10,962	22,030	8
Carpentras	10,918	25,800	6
La Rochelle.....	under 10,000 each	22,324	5
Charleville		23,399	5
Vesoul		23,441	20

The highest number of readers is at Toulouse, where 140 persons daily make use of the library of 50,700 volumes. At Avignon the 61,200 volumes, attract only eighteen readers a-day, and at Versailles the town-library, of little less magnitude than the last, has only twenty. These figures appear to justify Mr. Edwards's conclusion, that "the majority of them are poorly maintained and little used. . . . Above all, it is a fair inference from the examples cited, that in the main the old town-libraries have failed to extend their advantages to *all* classes of the town population, even where the circumstances both of maintenance and of accessibility have

* Edwards's "Free Town-Libraries," p. 206.

"been favourable." This failure appears to be an admitted fact, and the attempt to diffuse knowledge generally has been turned into other channels. Thus, in connection with the primary schools, there is a system of libraries, sustained from funds voted by the municipality from gifts, from fines, and from "a voluntary but annually fixed rate of payment for the use of books borrowed for domestic use." These libraries owe their origin to M. Rouland, in 1862, Minister of Public Instruction, and in 1867, 10,243 had been established; of this number 6,000 were also adapted for adult use. They received from the Minister of Public Instruction 325,409 volumes, from private donors 55,937, and 736,006 volumes were purchased by the municipalities. The experiment is regarded as a successful one. Great efforts are also being made in France for the dissemination of the best literature by means of associative popular libraries. The aggregate of these collections is already counted by millions.

An elaborate report of one of these *bibliothèques populaires* established at Versailles, was published in 1867, and as it is a document drawn up with great care, supplying with painful minuteness that information as to the class of literature read which is wanting in the statistics of the town-libraries, we shall give some account of it. The society was formed in 1865 with twenty members and a hundred books; in February, 1867, they had 727 members, and 2,300 volumes of books. In 1865, the number of volumes issued was 2,053; in 1866 it had increased to 3,864. An analysis of the nature of the issues is given, which may thus be tabulated:—

History	459	Scientific works.....	187
Voyages	440	Agriculture	60
Romances	1,735	Fine arts	24
Magazine Pittoresque	213	Technical works	31
Literature	323	Political economy.....	30
Philosophy	101		
The Drama	202		
			<hr/>
			3,814

The total of the classified statement does not quite correspond with the figures previously given. Of the total number of books issued, 1,848 were to working men. The greatest demand appears to be for works of fiction; of the 1,735 volumes of this nature given out, 719 only were read by the workers. But this class is analysed to show the character of the novels thus popular, for, observes M. Renaud: "There are some romances which are almost as beneficial as a scientific work or treatise on morality." The authors most in demand appear to have been Erckmann-Chatrain, Scott, Cooper, and Emile Souvestre.

Similar people's libraries have been established in Alsace, Paris,

and various other parts of the empire, and the amount of success which has attended them would appear to indicate that, if the town-libraries are not doing that amount of work which might be expected from them, it is because their management is out of harmony with the spirit of the age, rather than from any distaste for reading, more particularly amongst the working classes. M. Renaud has an anecdote worth repeating in this connection :—

“ A lady who lives in this town, and who takes great interest in “ popular education, having founded herself eight or nine libraries “ in different parts of Lorraine, told me that in one of these villages “ she had commenced one with only a dozen books. It was a small “ number certainly, and they could not well have started with less. “ These twelve books, when made accessible to the peasants, found “ seventy readers. She observed to me, ‘ what a thirst for know- “ ledge have these poor men.’ ”

It is curious, after this testimony, to be told by M. Claretie, that “ people read very little ” in France.

A defect of the French town-libraries is, that they do not systematically provide for home reading. The man who has acquired a love for reading by spelling through the romances of Erckmann-Chatrain by his own fireside, may safely be trusted to be an occasional visitor to the library where he may find the history of his country narrated in sober style. Our English lending libraries have not only gratified the thirst for reading, but have stimulated their frequenters into higher levels of intellectual taste.

VII.—Belgium.

Belgium has many free libraries, some of considerable antiquity; that at Antwerp dates from 1476, and the one at Tournay was founded in 1637. Mr. Edwards gives the following table :—

Name of Town.	Official Return of Number of Volumes in 1850.	Average Number of Volumes Annually added.	Estimated Number of Volumes in 1869.
Ghent	59,650	650	71,350
Tournay	26,230	200	29,830
Antwerp	19,148	450	27,248
Namur	17,000	110	18,980
Mons	15,000	200	18,600
Bruges	10,500	200	14,100
Ypres	9,250	110	11,230
Oudenarde	4,229	100	6,029
Arlon	3,000	150	5,700
Ath	3,000	40	3,720
Mechlin	2,500	90	4,120

Most of these Belgian libraries, whilst constituted as libraries of

consultation, lend out their books to persons who apply for a permission, easily obtained. At Tournay, Oudenarde, and Arlon, the libraries are open on Sunday. On this point the librarian at Mons reports, "that the town-library was kept open from 10 to 1 on "Sunday for two years," but so little advantage was found to have been derived, that the practice was discontinued.*

VIII.—*Germany.*

Of the municipal libraries in Germany, the most important is that of Hamburg, which owes its origin to John Bugenhagen in 1529, who gave his agents the best possible advice for the formation of a large library—that is, to collect all books, good and bad alike. In 1610 extensive additions were made to it by the liberality of Burgomaster von Bergen. Up to 1650 it was a school library attached to the Johanneum. Since its transformation into a town-library, it has been the fortunate recipient of a series of noble benefactions. Marquis Schlegel, Jungius Sellius, Holstenius, Langenbeck, Placcius, von Struve, Lappenberg, and many others have given important collections to the town-library of Hamburg. Perhaps the most important was that of John Christopher Wolf, who gave his library to the town, reserving to his brother, J. C. Wolf, the use of it for life. J. Christian Wolf made various additions to it, and in 1746 was appointed librarian of the public library. The Wolf library was a singularly fine one, and included many Hebrew MSS., and a large collection of autographs. The Hamburg library is estimated to contain about 190,000 volumes, is open six days weekly, and issues about 4,000 volumes yearly to borrowers. This number, although remarkably small in proportion to the excellence and extent of the collection, shows a slight increase on the issues of the preceding year.

Breslau is another famous German library. Thomas von Rhediger, who died in 1576, bequeathed to the town his entire collection of books and antiquities, which had cost him 17,000 gulden to purchase. Many years elapsed before this princely benefaction was made fully accessible to those for whom it was intended, but it has since received many important additions. In 1864, when it had grown to 80,000 volumes, it was incorporated with the library of St. Bernardin, and the library of St. Mary Magdalen. The result of this combination is a library of 360,000 volumes, including many important Greek, Mediæval, and Arabic MSS., and many early printed books. There are many other town-libraries in Germany, as the following table, condensed from Mr. Edwards, will show, adding later figures where they are available :—

* Edwards's "Free Town-Libraries," p. 268.

Name of Town.	Population.	Estimated Number of Volumes.	Number of Volumes in 1869.	Number of Issues.
Hamburg	251,000	190,000	300,000	4,500
Breslau	138,651	130,000	360,000	9,000
Cologne	120,668	52,000	—	—
Bremen	98,575	36,000	60,000	8,000
Frankfort	89,837	84,000	—	2,000
Madgeburgh	86,301	15,000	—	900
Leipsic	85,394	113,000	—	—
Dantzic	82,765	43,000	—	—
Nuremberg	62,797	52,000	—	—
Augsburgh	50,640	120,000	—	—
Mentz	42,074	—	100,000	8,200
Erfurt	40,143	32,500	—	—
Lubeck	31,898	44,000	—	—
Gorlitz	27,983	13,200	—	—
Elbing	25,539	20,500	—	—
Bamberg	23,542	75,000	—	—
Treves	21,674	90,500	100,000	800 (readers)
Luneburgh	15,691	22,700	—	—
Esslingen	15,691	2,000	—	—
Kaiserslautern	13,502	2,600	—	3,200
Grossenhain	9,122	4,500	—	—
Lauban	7,432	1,520	—	700
Lindau	5,248	—	—	600

The town-libraries of Germany, like those of France, do not at the present day appear to reach all classes of the community, and *volks bibliotheken*, of a similar description to the one at Versailles, are becoming increasingly common. Sometimes the expenses of maintenance are met by a fund which accrues from these five distinct sources:—1. A fixed contribution from the common funds of the village or parish. 2. A fixed contribution from the chief proprietor (*Beisteuer des Guts herrn*). 3. Small payments of borrowers. 4. Customary contributions gathered at marriages, baptisms, and other festive gifts. 5. Voluntary gifts.*

IX.—Italy.

The number of libraries open to the public in Italy at the end of 1865, was 164. The total number is 210. The largest town-library is that of Bologna, which contains 102,860 volumes, and was used by 14,355 persons. Genoa, which has 39,604 volumes, was consulted by 50,400 persons. This library appears to be managed with commendable liberality, and for a considerable portion of the year is open ninety hours weekly to the public. Thirty-nine libraries are of a special character; twenty-five are ecclesiastical, scientific, and literary; and three are art libraries. The total

* Edwards's "Free Town-Libraries," p. 239.

number of volumes contained in these collections, is 4,149,281. The class of works read, are summarised thus:—

Theology	54,491
Morals and philosophy	70,537
History and philology.....	122,496
Jurisprudence	193,972
General literature	261,689
Encyclopædias	101,797
Mathematics and sciences	183,528
	<u>988,510</u>

These figures have been thought to prove the tendency of the age to abandon scholastic for positive science, but figures require to be carefully handled before any general deductions can be drawn from them.

The statistics of English libraries would appear to warrant a similar assertion, and yet we know that the circulation of religious literature in England is enormous. The total income of 143 of these Italian libraries was, in 1863, only 30,000*l.*, of which 7,000*l.* was derived from the town authorities, and the rest from the Government. Amongst the most notable of the communal libraries, we may name—

	Volumes.	Hours Open Weekly.	Volumes Issued.
Bologna	102,860	—	14,355
Palermo	101,155	24	21,900
Reggio	70,000	42	—
Bergamo	72,000	30	9,000
Forlì	50,000	30	—
Siena	49,633	42	6,858
Piacenza	42,000	36	1,800
Genoa	39,604	90	50,400
Ravenna	36,957	30	451
Perugia	25,608	20	—
Rimini	24,100	15	792
Como	21,000	25	2,550
Cesena	18,000	25	—
Imola	18,000	17	—

The little town of Cesena possesses two public libraries, one of them a collection of which the greatest city would be proud. In 1452, Dominic Malatesta, Prince of Cesena, gave to the town his collection of MSS., which was renowned as containing the finest specimens of mediæval caligraphy and illumination that wealth and taste could bring together. The other library is only seventy years old, and contains about 18,000 volumes.

At Prato, in 1861, there was established the first of the *biblioteche circolanti popolari*, which have now been established in more than thirty places in the kingdom of Italy. These libraries appeared to be based upon the same plan as the *bibliothèques populaires* of France, "but the most zealous of the promoters avow, "as their ultimate aim, the establishment of absolutely 'free lending libraries,' as a public provision for a public necessity."*

X.—Spain.

The following paragraph on Spanish libraries is copied from the "Pall Mall Gazette" of 3rd September, 1868.

"The 'Annual of Public Instruction,' published at Madrid, "contains some interesting details of the national libraries in Spain. "The number of volumes contained in those establishments is "1,166,595, spread over the capital and the provinces; the library "of Madrid alone contains 300,000; that of the Central University, "300,000; of Barcelona, 136,000; and of Salamanca, 55,000. There "are similar institutions, not only on the continent, but in the "Balearic and Canary Isles; that of Palma and Majorca contains "35,000 volumes, and that of Mahon nearly 11,000. As to the "archives, the entire history of the country, of its customs, and "political life may be said to be represented in them; there are "70,278 packets of papers in the old palace of Simancas, 35,000 at "Alcala de Henares, 34,000 in the archives of the Crown of "Arragon, and 97,000 in the national historical record office. At "Valencia, Corunna, and Majorca there exists an immense number "of papers, manuscript volumes, account-books, and parchments "preserved with care, and which show the interest Spain has "never ceased to take in written monuments and serious studies. "The same publication contains also some indications concerning "the general state of instruction in the Peninsula and the adjacent "islands. There are 27,000 infant schools, attended, according to "the last census, by 1,500,000 children; 77 institutions for training teachers, and five for the deaf and dumb or blind. With "respect to secondary instruction, there are two establishments of "the first class, 16 of the second, 32 of the third, and 14 local "institutions. There are ten universities for teaching theology, "law, medicine, pharmacy, the sciences, literature, and philosophy. "In addition to these there are several special schools, of which "11 are for the fine arts, one for music and declamation, two for "manufactures, one for diplomacy, five for commerce, 17 for navigation; also 29 boarding schools and 118 private establishments. "The budget of public instruction amounts to 22,428,090 reals, but "the sums raised for the same object in the provinces and the

* Edwards's "Free Town-Libraries," p. 265.

“communes, increase the total amount expended on educational purposes to 110,000,000 of reals.”

XI.—*The Utility of Free Town-Libraries at Home and Abroad, Compared.*

It now only remains to make some general comparisons between the various town-libraries at home and abroad, as to their extent, accessibility to the public, the extent to which the public use them, and the class of the books which are read.

In size the largest of the English free libraries is that of Manchester, having 92,355 volumes; Liverpool has 88,756 volumes; Nottingham, 14,130; Cardiff, 4,643.

These figures are much less than many of the continental libraries. Lyons has 121,000; Strasbourg, 181,589; Toulouse, 50,700; Rouen, 112,355; Charleville, 23,999; Ghent, 71,350; Antwerp, 27,248; Bologna, 102,860; Bergamo, 72,000; Perugia 25,608; Boston (Massachusetts), 152,697. It must be borne in mind that the foreign libraries have only reached their present numerical superiority after, in some cases, centuries of growth. Manchester has acquired 90,000 volumes in seventeen years. The Strasbourg library was founded in 1531, that of Aix in 1786, Tournay in 1637. Many of the continental libraries also profited by the ruin of the monastic libraries; and some of them have been greatly enlarged by the liberality of citizens, who have bequeathed their collections to the towns of which they were natives, or with which they were otherwise connected. Instances of similar donations to English town-libraries are yet rare. At Boston (Massachusetts), they have thus acquired the large and valuable library of the late eloquent and earnest Theodore Parker.* They have also been enriched by various benefactions in money. The Liverpool library has profited by the liberality of Sir William Brown, Joseph Mayer, Esq., and the Earl of Derby. Manchester has acquired a small but curious Chinese library by the testamentary liberality of the late Thomas Bellot, R.N. Such donations are, however, yet unfrequent. If we compare the annual growth of libraries, we shall find that our English town-libraries are progressing as rapidly as those of the continent. At Manchester the average annual increase of the seventeen years during which it has been open is 4,179. At Liverpool they add to their collection about 2,100 volumes per annum; at Blackburn, 1,200; at Salford, 400; at

* When the new volume of the “Boston Catalogue” is issued, we shall be better able to appreciate the worth of the bequest; in the meantime the reader may refer to Weiss’s “Life of Parker” (vol. ii, p. 2), where he will find some particulars of this remarkable collection.

Sheffield, 1,300; at Amiens, 400; at Bremen, 700; at Hamburgh, 5,000;* at Mentz, 1,000; at Tournay, 500; at Treves, 250.

Few of the continental libraries appear to be open in the evening. That of Genoa is a notable exception, and is stated to be open ninety hours weekly. At Manchester the lending libraries are open from 8:30 a.m. to 9 p.m., seventy-five hours weekly; and the reference library from 10 a.m. to 9 p.m., sixty-six hours weekly. This appears to be the general average of English libraries.

At Rimini they are open fifteen hours weekly; at Reggio, forty-two.

The extent to which the libraries are used by the public, may be either stated by the number of volumes issued, or the number of persons frequenting the institutions.

At Cardiff they issued in 1869 17,821 volumes; at Birmingham, 527,514 volumes; Liverpool, 1,063,558; Manchester, 873,648. At Bremen the yearly issue is about 8,000 volumes; at Hamburgh, 4,500; at Mentz, 8,000; at Tournay, 5,000 volumes. In popularity the English libraries greatly surpass those of the continent. If the number of persons is compared, the fact is equally prominent. It is estimated that 2,172,046 individuals made use of the Manchester libraries and newsrooms. At Liverpool they have daily over 2,000 readers in the reference library; at Treves they have about 800 yearly; at Lyons, about 70 per day; at Toulouse, 140. In all the English lending libraries, a large proportion of the issues consist of works of fiction. In those reference libraries which place novels upon their shelves, the result is the same.

Mr. Winsor ascertained that at Liverpool the issues of fiction are 33 per cent. in the reference library, and 73 in the circulating; at Sheffield lending library, 42; at Birmingham, 40 per cent. In the last named library they have rigidly excluded *every* mere novel from the reference library; at Manchester there are very few, at Liverpool there are over 5,000 volumes. The rate appears to vary considerably. On the other side of the Mersey, at Birkenhead, it is only 25 per cent.

The same preponderance of novels over all other classes of reading, where all classes are provided, is found to exist in proprietary libraries. The rate of the issue of novels from Mr. Mudie's establishment will certainly not be smaller than from the town-libraries. Abroad popular books of this class appear to be very little supplied, and where they are bought, their use is systematically discouraged. There are, therefore, no fair means of comparing ourselves with our

* Mr. Edwards considers this estimate too high. In 1865 and 1866, there were 12,492 "works and portions of works" added to the library. Of this number 1,595 only were purchased, the rest being obtained by exchange, gift, and copyright. See Edwards's "Free Town-Libraries," p. 231.

continental friends in this respect. The last report of the library at Cardiff, enables us to form an estimate of the class by whom novels are chiefly read. The librarian, Mr. Thomas John Lean, remarks:—

“The question having been frequently raised, ‘Whether the
“‘working classes, as a rule, use the free libraries for the purpose
“‘of mental culture, or simply to gratify a morbid taste for sensa-
“‘tional and fictitious reading?’ I have carefully analysed the
“‘borrowers and books borrowed by them during the first week in
“‘January, which I beg to submit:—

	Volumes.	
	Artisans.	Middle and Upper Classes.
Theology and natural philosophy	11	3
Natural history	4	1
Science and arts.....	4	1
History and biography	27	9
Topography	5	—
Geography and travels	21	7
Miscellaneous literature	18	22
Jurisprudence.....	—	2
Commerce and statistics	2	1
Education	4	1
Poetry and dramatic literature.....	4	2
Novels	110	126
	210	175

As a rule, after fiction history is chiefly in demand, then natural science, and in all cases works of a theological nature are little sought after. When the immense amount of religious literature diffused by other agencies is considered, this last fact cannot be surprising.

In the number of town-libraries in existence, the Continental States are still in advance of us, and also in the size of some of these municipal institutions. In adaptation to popular wants, and as instruments of education, in steady growth, in accessibility to the public, our town-libraries stand in the first rank. In the amount of work which they perform, they are unrivalled. And there is reason to think that their usefulness will be very greatly developed in the course of the next decade. With an extended system of primary education, there will certainly be an increase of students in the halls of our town-libraries. In Massachusetts they are said to regard town-libraries as the natural supplement of town schools. They are places where the elementary knowledge of

science and literature acquired in the primary schools, may be increased in any direction the student may wish.

Having now completed this imperfect attempt at chronicling the results of the working of the Public Libraries Act of 1850, and also of comparing our position with that of our continental neighbours, it is only necessary to add that the facts of the case seem to me full of encouragement for the future.

Note.—The statistics in this paper are derived from the official reports of the libraries, from a parliamentary return, from Mr. Edward Edwards's important work on "Free Town-Libraries," and from the "Seventeenth Annual Report of the Boston Public Library." Mr. Justin Winsor, the present superintendent, has the same catholicity of view which distinguished his predecessor, Mr. Jewett, and the present report contains information respecting European and American libraries, which will be very welcome to all who take an interest in "bibliothéconómie." In Trübner's "American and Oriental Literary Record," No. 52, December, 1869, there is a list, by the present writer, extending to fifty-five articles of books, &c., relating to free libraries, which may be worth consulting by those who desire to investigate the subject further.

APPENDIX.

TABLE I.—*Total Number of Books Issued in the Liverpool Libraries.*

	Year.	Reference Library.	Lending Libraries.
		No.	No.
Duke Street	1852-53	128,683	—
"	'53-54	129,997	35,978
"	'54-55	131,912	99,021
"	'55-56	153,169	229,348
"	'56-57	166,346	308,200
"	'57-58	195,433	391,413
"	'58-59	202,534	436,509
"	'59-60	195,962	463,712
William Brown Street	1860-61	297,417	489,899
"	'61-62	456,372	487,791
"	'62-63	472,010	461,080
"	'63-64	420,590	432,251
"	'64-65	420,127	444,242
"	'65-66	472,102	401,374
"	'66-67	578,774	420,282
"	'67-68	565,344	423,547
"	'68-69	624,619	438,939
Total	—	5,611,391	5,963,586

Note.—From this it will be seen that from October, 1852, to 31st August, 1869, these libraries have issued 11,574,977 volumes.

TABLE II.—*Statement showing the Expenditure in the Various Departments to end of Municipal Year, 31st August, 1869.*

Derby museum and Mayer gallery of national and foreign antiquities	£ 3,284
Visitors 505,000 per annum, William Brown Street.	
Free public reference library, William Brown Street, containing about 50,000 volumes, and issuing about 620,000 per annum	2,722
Two branch lending libraries, Great Nelson Street North, and Upper Parliament Street, containing about 40,000 volumes, and issuing about 420,000 per annum	1,545*
	<u>7,551</u>

SUMMARY.

Total ordinary expenditure.....	£ 7,551
Extraordinary: preparing new catalogue, printers' expenses, free lectures, gas fittings, &c.....	905
Total annual expenditure	<u>8,456</u>

* This item is reduced by a sum of 200*l.* to 30*l.* received for fines, catalogues, cards, &c.

TABLE III.—Statistics of Free

Name of Place.	Population in 1861.	Act Adopted.	Library Opened.	Number of Volumes.		
				Reference.	Lending.	Total.
Airdrie	14,435	1853	—	—	—	2,260
Ashton-under-Lyne	34,886	'69	—	—	—	—
Bath	52,528	—	—	—	—	2,400
Bebington†	15,105	—	1866	—	—	—
Birkenhead	61,000	—	—	1,500	11,301	12,801
Birmingham	296,076	1860	—	—	—	—
Reference library	—	—	1866	22,495	—	—
Central lending library	—	—	'65	—	11,572	—
Constitution Hill „	—	—	'61	—	6,567	—
Deritend „	—	—	'66	—	4,487	—
Gosta Green „	—	—	'68	—	3,975	—
Adderley Park „	—	—	'64	—	2,226	51,322
Blackburn	63,126	1853	'60	6,791	7,879	14,670
Bolton	70,395	'52	—	15,946	8,634	24,580
Bristol	154,093	—	—	8,300	—	8,300
Burslem	22,327	—	—	—	—	—
Cambridge	26,361	1853	1855	3,790	10,307	14,097
Canterbury	21,324	—	'46	—	—	2,600
Cardiff	32,954	1862	'62	—	—	4,842
Carlisle	29,417	—	—	850	—	850
Coventry	41,647	1867	1868	1,286	9,369	10,655
Doncaster	16,406	1868	1869	—	—	10,000
Dundalk	12,731	—	—	—	—	—
Dundee	91,664	—	—	—	—	—
Ennis	11,768	—	—	—	—	—
Exeter	33,738	—	—	—	—	—
Hertford	6,769	—	1855	—	—	1,800
Ipswich	37,950	1853	—	—	—	4,329
Kidderminster	15,399	1855	—	—	—	950

Note.—The principal authority for this table is the parliamentary return just issued, but

* These figures indicate yearly issues.

† Bebington library and Park is the property of Joseph Mayer, Esq., F.S.A., whose princely is open free to the people of Bebington.

Libraries in Great Britain.

Number of Issues.			Annual Cost.	Observations.	Name of Place.
Reference.	Lending.	Total.			
—	—	1,200	£ 42	{ 1d. rate produces 81l. 18s. 3d. }	Airdrie
—	—	—	—	Library not yet formed	Ashton-under-Lyne
—	—	—	—	Not under the Act	Bath
—	—	30,352*	—	"	Bebington†
10,285	67,121	77,406*	100	These figures are for 1866	Birkenhead
18,500	—	—	—	—	Birmingham
—	—	—	—	—	Reference library
—	—	—	—	—	Central lending library
—	—	—	—	—	Constitution Hill "
—	—	—	—	—	Deritend "
—	—	—	—	—	Gosta Green "
—	25,250	43,750	2,860	1d. rate produces 4,250l.	Adderley Park "
300	2,500	2,800	380	½d. rate	Blackburn
3,147	5,636	8,783	400	"	Bolton
2,761	—	2,761	—	Not under the Act	Bristol
—	—	—	—	—	Burslem
5,461*	39,312*	44,773*	300	1d. rate produces 450l.	Cambridge
—	60	—	190	{ ½d. rate. Readers and visitors are 1,050 }	Canterbury
—	17,333	17,333	500	—	Cardiff
—	—	—	—	Patents only	Carlisle
—	—	6,322	362	3,172 borrowers	Coventry
—	—	—	—	—	Doncaster
—	—	—	—	—	Dundalk
—	—	—	—	—	Dundee
—	—	—	—	—	Ennis
—	—	—	—	{ Museum and library now forming }	Exeter
100	1,200	1,300	95	1d. rate	Hertford
—	—	—	474	Reference library only	Ipswich
—	—	—	70	25 readers daily	Kidderminster

some of its omissions, &c., have been supplied from other sources of information.

gift of his museum to the people of Liverpool is elsewhere noticed. By his liberality the library

TABLE III.—Statistics of Free

Name of Place.	Population in 1861.	Act Adopted.	Library Opened.	Number of Volumes.		
				Reference.	Lending.	Total.
Leamington Priors	17,402	1857	—	—	—	5,000
Leeds	207,165	'69	—	—	—	—
Leicester	68,056	'69	—	—	—	—
Lichfield	6,893	'60	—	—	—	2,500
Liverpool	443,938	—	—	—	—	—
Reference library	—	—	—	50,000	50,000	100,000
North lending library	—	—	—	—	—	—
South "	—	—	—	—	—	—
London (Guildhall library)	—	—	—	—	—	—
Lynn	4,534	—	—	—	—	—
Maidstone	23,016	1855	—	—	—	3,500
Manchester	338,722	'52	—	—	—	—
Reference library	—	—	1852	40,498	—	—
Campfield lending library	—	—	'52	—	14,000	—
Hulme "	—	—	'57	—	10,388	—
Chorlton "	—	—	'66	—	8,589	—
Ancoats "	—	—	'57	—	8,217	—
Rochdale Road "	—	—	'60	—	8,597	90,289
Northampton	32,813	—	—	—	—	—
Norwich	74,891	1854	1857	—	—	4,700
Nottingham	74,693	'67	—	—	—	13,500
Oxford	27,560	—	—	—	—	—
Paisley	47,406	1867	—	—	—	20,000
Preston	82,985	—	—	—	—	8,000
Salford	102,449	—	1849	21,424	10,190	31,614
Stirling	14,012	—	'55	—	—	2,000
Sunderland	78,211	—	—	—	—	—
Tynemouth	34,021	—	—	—	—	15,000
Walsall	37,760	1859	—	—	—	5,500
Warrington	26,431	—	1848	—	—	9,370
Warwick	10,570	1865	—	—	—	2,237
Westminster	254,623	—	—	7,000	—	—
Winchester	14,776	1851	—	1,600	—	1,600
Wolverhampton	60,860	'69	—	—	—	—

* See ante,

Libraries in Great Britain—Contd.

Number of Issues.			Annual Cost.	Observations.	Name of Place.
Reference.	Lending.	Total.			
—	—	26,287*	£ 366	{ In 1856 lending library only	Leamington Priors
—	—	—	—	No library formed	Leeds
—	—	—	—	—	Leicester
—	—	—	100	Six readers per month ...	Lichfield
35,400	35,300	70,700	4,808	1d. rate produces 8,660l.	Liverpool
—	—	—	—	—	Reference library
—	—	—	—	—	North lending library
—	—	—	—	—	South
—	—	—	—	Not under the Act	London (Guildhall library)
—	—	—	—	{ Public library founded by Lord Stanley	Lynn
—	—	540	300	Reference library only ...	Maidstone
357,036*	—	—	—	—	Manchester
—	90,115	—	—	—	Reference library
—	123,105	—	—	—	Campfield lending library
—	98,822	—	—	—	Hulme
—	55,077	—	—	—	Chorlton
—	94,445	818,100*	5,000	1d. rate	Ancoats
—	—	—	—	—	Rochdale Road
—	—	—	—	—	Northampton
760	1,333	2,093	141	{ 800 readers and visitors monthly. 1d. rate....	Norwich
—	—	14,459	1,000	Lending library only	Nottingham
—	—	—	—	—	Oxford
—	—	—	—	—	Paisley
—	—	—	100	{ Reference library only. Founded by Dr. Shep- herd	Preston
5,300	5,000	10,300	1,565	1d. rate	Salford
—	—	—	36	{ Founded by Mr. J. Mac- farlane	Stirling
—	—	6,500	—	{ Founded by Mr. Cand- lish, M.P.	Sunderland
—	—	—	—	Act just adopted	Tynemouth
—	—	3,500	270	Lending library only	Walsall
123	479	602	250	1d. rate	Warrington
—	—	1,300	142	—	Warwick
11,475*	37,371*	48,846*	731	In 1866	Westminster
—	—	2,000	108	Reference library only	Winchester
—	—	—	—	Library not yet formed ...	Wolverhampton

The INFLUENCE of PRICE upon the CULTIVATION and CONSUMPTION of COTTON during the TEN YEARS 1860-70. By WILLIAM B. FORWOOD, ESQ., Vice-President of the Liverpool Chamber of Commerce.

[Read before Section F, British Association, at Liverpool, September, 1870.]

THE visit of the British Association to this town, which owes its great commercial eminence to the cotton trade, seems to be a fitting opportunity to draw the attention of those members interested in economical science, to the effect which has been produced by price upon the growth and consumption of cotton during the past ten years.

We have witnessed within the compass of that period the direst civil war of which history bears record—that between the Northern and Southern States of North America—a war which not only arrested the growth of cotton entirely for the space of four years, but also, by the abolition of slavery, completely changed the condition under which it had been produced.

Prior to the year 1861, which marks the outbreak of the war in America, we had relied mainly upon the Southern States of America for our supply of cotton. In the year 1860, the American cotton crop reached 4,675,000 bales, which was disposed of as follows:—

To Great Britain	2,669,432
„ France	589,587
„ Continent	515,154
Consumption of United States	978,043
Stock left over	227,708

thus of our total import of cotton into this country in 1860, of 3,366,500 bales, we received 2,580,700 bales from America, 103,380 bales from Brazil, 109,400 from Egypt, 9,800 from the West Indies, and 563,200 from the East Indies. The average price of middling Orleans in that year was 6·56*d.*, and of fair Dhollerah Surat 4·35*d.*; these would nett to the planter in America and the ryot in India 5*d.* and 3½*d.* per lb. respectively. The cost of the cotton import into this country was 35,000,000*l.*, of which 27,000,000*l.* went to America. There is no doubt that 5*d.* per lb., which was the price returned to the American cotton planter, though rather less than he had received for some years previously, was sufficiently remunerative

under the then system of labour and cultivation in the Southern States; the planters were for the most part men who had inherited their plantations and slaves, and the expense therefore in cultivating cotton was almost measured by the cost of provisioning their negroes. No moneys were invested in fertilisers; as soon as one part of the plantation was exhausted by successive crops, new ground was opened out; thus, while the planter looked for the natural increase in his slaves to give him interest on his capital, if not, indeed, to add to his capital, he looked only to his crop to pay the cost of the food and clothing consumed, and the balance was profit.

Great as had been the increase in the cultivation of cotton in the United States, which had increased from 2,355,257 bales in 1850 to 4,675,770 bales in 1860, there is reason to believe that, if circumstances had permitted this system of culture to be persevered in, but a few years would have elapsed before the most productive lands would have been exhausted.

It is not supposed that the prices netted to the Indian ryot for his produce could have been very remunerative, as our supply of cotton from India made very slow progress—its increase only amounting to 237,000 bales during the ten years from 1850 to 1860.

In 1860 the following was the proportionate supply which reached our shores:—

	Bales.	Per Cent. of Total Import.
United States sent us	2,580,700	76·66
East Indies	563,200	16·73
Egypt	109,400	3·25
Brazil	103,300	3·09
Turkey	100	0·003
West India, &c.	9,800	0·29
Total	3,366,500	—

In April, 1861, advices were received of differences existing between the Government at Washington and the Southern Confederation, which were followed by news of the bombardment of Fort Sumpter; it was at once seen that the great artery of our cotton supply would be cut off, and its value therefore rapidly advanced, until middling American cotton was quoted in November 1s. per lb., and fair Surat $8\frac{1}{2}$ d. per lb. It is not our purpose here to trace the fluctuations in value which oscillated with the prospects of the war being terminated at an early period or not. In October,

1862, middling Orleans touched $27\frac{1}{2}d.$ per lb., and fair Dhollerah $17\frac{1}{4}d.$ per lb.; and our total stock of cotton was reduced to 210,000 bales. This high range of values formed a great inducement to push forward cotton to this market; enterprises were formed to bring out the stock remaining in the United States by means of swift steamers running the blockade. India taxed herself to send us all the cotton she could spare, which reached 986,290 bales in 1861, and 1,072,708 bales in 1862, and this was the only country which sent us any increase in 1861, thus proving that she had previously kept back a large quantity for home consumption; but still the extra supply sent forward was disappointing, for it was the popular belief that the production of India did not fall very much short of that of America.

We will now trace the effect of price upon production: the average value of fair Surat in 1862 was $12\frac{1}{4}d.$, of fair Egyptian $19d.$, and fair Brazilian $18d.$ per lb., being an average increase of 150 per cent. over the average values of 1860. Our import in 1862 was as follows:—

	Bales.	Proportion of Import.
		Per cent.
American	71,750	4·96
Brazil	133,810	9·26
West Indies	20,470	1·42
Egyptian	181,750	9·12
East India	1,069,440	74·01
Turkey, &c.	14,800	1·03
China and Japan	2,980	0·20
Total	1,445,000	—

The total import in 1862 was 533,223,819 lbs., against 1,429,697,450 lbs. in 1860. See Table A (Appendix).

As might naturally be supposed there was at first considerable reluctance to embark in the cultivation of cotton, as it was felt that directly the American war ended, she would again pour out her supplies, and render cotton cultivation in other countries more or less unprofitable; but as time rolled by confidence was gained, that even if the war were to end labour would be so disorganised that it would be at least some years before America could assert her old supremacy. Egypt, headed by her Viceroy, embarked boldly into cotton cultivation; thus we find our import from Egypt increased from 109,400 bales in 1860 to 335,575 bales in 1865. Brazil was hardly less active than Egypt, she sent us 340,261 bales against 103,300 bales in 1860. Turkey started in the enterprise, and large tracts of country were placed under cotton cultivation in Asia

Minor, and even China found, at the high prices current in our markets, she could spare us 141,610 bales, and we had also a largely increased import from Madras^a and Bengal. But, strange to say, Western India showed only a slight increase on 1861, and this can only be accounted for by the ignorance of the ryots, and the fact that the dealers, and not the growers, had reaped the large profit during the preceding few years; thus the effect of three years of high prices—prices greatly in excess of the cost of production—was to increase our supplies from other sources than America in the four years from 1860 to 1865 by 1,508,000 bales, the details of which will be seen in the following table:—

Imports.	1860.	1865.	Increase.	Proportion of Supply.	Decrease.
America	2,580,700	461,927	—	Per cent. 16'77	2,118,773
Egypt	109,400	333,575	224,175	12'11	—
Brazil	103,300	340,261	236,961	12'35	—
Turkey	100	80,303	80,203	2'92	—
West Indies, &c.	9,800	131,120	121,320	4'76	—
Surat	507,940	956,886	448,946	34'73	—
Madras	54,780	177,882	123,102	6'46	—
Bengal	480	131,757	131,277	4'78	—
China.....	—	141,610	141,610	5'14	—
Total	3,366,500	2,755,321	—	—	611,179

Among the minor sources of supply generalised under the head of West India, we received cotton from Tahiti, from Peru, Central America, Queensland, Australia, and the West Indies; in many cases the produce of private enterprise, in others of wealthy companies.

The month of April, 1865, witnessed the fall of Richmond and the capitulation of General Lee and his army, which brought to an end the American strife; but with peace came also the abolition of slavery, and so impressed were all connected with the cotton trade with the conviction that it could not be produced by free labour, and that as freedmen negroes would not work, that the effect of peace only caused a temporary decline in prices, and middling Orleans which, on the news of peace in April fell to 14*d.*, marked 24*d.* per lb. in October; but even this temporary decline, occurring as it did during the planting season, produced its effect on Egypt, from which country our import in 1866 fell off to 167,451 bales. India, however, sent her largest supply this year, the result of the opening up of the interior by railways, and the efforts of Government to extend the cultivation of cotton; we received from Western India 1,206,600 bales, besides a largely increased import from Madras and Bengal.

The uncertainty which existed as to the growth of cotton in America under the new *régime* continued to sustain prices at a high level; thus, while our import in 1866 was 1,356,952,389 lbs. against 1,429,697,450 lbs. in 1860, a decrease of only 72,745,061 lbs. = 181,862 bales of 400 lbs., the average price of middling Orleans was 15½d. per lb., and of fair Dhollerah Surat 11¾d. per lb. This high range of values led to great exertion being made in America to overcome the difficulties in the way of cotton cultivation, the principal of which was the scarcity of labour and the little reliance to be placed upon it—the scarcity was produced by the war and the natural preference negroes have for a town life; plantations could be bought at a very great reduction upon their value before the war, and therefore labour was practically the only difficulty in the planter's way. By dint of high wages and a system of co-operation, by which a certain portion of the crop was given to the negro, an increasing supply of labour was obtained, which was supplemented by the substitution of a system of tillage by the plough and mules for that of the hoe and slave. Greater economy in cultivation has also been obtained by the extensive use of fertilisers, manufactured from phosphates, which are found in great abundance in the neighbourhood of Charleston; thus, while under the slave system of cultivation a bale of cotton to every 2½ acres was considered a fair average yield, now on some plantations a bale is made from every acre under cultivation.

The crop in America, which in 1866 was 1,951,985 bales, was this year 3,035,000 bales;* and the Bureau of Agriculture in Washington estimates the crop for next year at 3,500,000 bales, the cost of production, which in 1866 was 10d. per lb., has been reduced, and it is now supposed not to exceed 7d. per lb.

The year 1866 was the last of what may be termed artificial prices, produced by the fear of scarcity; thus, while in 1866 the price of middling Orleans fluctuated from 21d. per lb. to 12½d. per lb., averaging 15½d., and fair Surat oscillated from 9½d. per lb. to 20d., averaging 11¾d. in 1867, the fluctuations in the value of American were only from 7½d. to 15½d., averaging 10¾d. This large decrease in value was not without its effect upon some of our sources of supply. Egypt only sent us in 1866 188,689 bales, a reduction of 40 per cent. as compared with 1865; the peasantry of this country, ground down by excessive taxation and capricious laws, which rendered the fruits of their industry so uncertain in tenure, that there was no inducement to produce cotton when its price would no longer pay the vexatious imposts placed upon the grower, gave up the cultivation of the staple; thus large tracts of land in this fertile

* Exclusive of the quantities taken for consumption south of the Potomac.

country were laid waste, and land which in 1865 was worth 50*l.* per acre, is not now worth 5*l.* The north-west provinces of India only sent us 169,198 bales in 1868, against 346,727 in 1866, because the Chinese paid a higher price than was afforded by our markets. China and Japan had entirely ceased to contribute to our supply, and Turkey, which in 1865 sent us 80,303 bales, only yielded 12,758 bales in 1868. Brazil still kept well up, cotton planting in this country, which has largely passed into the hands of ex-American planters, appears to have become firmly seated, and in 1868 we received the large quantity of 636,897 bales; from the extent of its territory and fertility, and suitability of its climate, we expect to see a continued increase in the production of this country, and we believe it will become ere long a most important source of supply.

Apparently greater endeavours have been made during the past two or three years to plant a large crop in Western India than previously; thus the crop of 1869 would have reached, had there not been a very bad season, it is estimated, 1,400,000 bales, and we hear that the area of land now being placed under cultivation shows a considerable increase upon last year. This is exceedingly gratifying, because the difficulties which had to be overcome in India were hardly less than those in America; the system of cultivation has been changed, and we see the results not only in the improving quality of the cotton, but in its gradual increase, better means of transit have been opened up, and so by cheapening the cost of carriage to the shipping ports, the grower receives a large proportion of the selling price of his crop.

From this brief sketch we have seen how "price" has enabled us to tide over the cotton famine produced by the American war. We have seen how potent and how quick its effect was in the most distant parts of our globe, how the Japanese and the inhabitants of the Pacific Isles alike were aroused into activity to gain part of the prize that was to be obtained by sending the fruit of their toil to our shores.

We have seen how high values—by recouping the fixed capital which the planter has to lay out at his first outset—promote, as in Brazil and India, and even in America under the new *régime*, an industry which might otherwise never have been profitably and therefore successfully initiated. All these points we know are maxims to the political economist; as water finds its level, so will price regulate supply, but these maxims have never been so fully demonstrated as during the crisis through which the greatest trade of the world has gone during the past ten years.

Consumption.

We now turn to investigate the effect of price on the consumption of cotton and cotton goods. It has been truly said that cotton fabrics are used daily by every civilised being on the face of the globe; for years and years they have been the cheapest form of clothing. English calicoes have gradually superseded the native productions; and the cotton of India, Brazil, and Egypt is sent to this country, to be returned in a manufactured state.

The average price for 30s mule yarn in 1860 was $12\frac{1}{2}d.$ per lb.; the lowest price it had ever touched was $9d.$ per lb., in 1854. The average price of $8\frac{1}{4}$ lb. shirtings in 1860 was $9s. 6\frac{1}{2}d.$ per piece; the lowest price they had ever touched was $7s.$ in February, 1854, when middling Orleans was $5\frac{1}{4}d.$ per lb. For many years prior to 1860, the cotton spinners of Lancashire and Cheshire had conducted a very profitable trade, the result was a large extension of manufacturing power. The following table shows the number of cotton factories in the years 1856, 1861, 1868:—

Cotton Factories.	Number of Factories.			Number of Spinning Spindles.*		
	1856.	1861.	1868.	1856.	1861.	1868.
England and Wales.....	2,046	2,715	2,405	25,819,	28,352,	30,478,
Scotland	152	163	131	2,041,	1,915,	1,398,
Ireland	12	9	13	151,	120,	124,
United Kingdom	2,210	2,887	2,549	28,011,	30,387,	32,000,

Cotton Factories.	Number of Power Looms.*			Number of Persons Employed.*		
	1856.	1861.	1868.	1856.	1861.	1868.
England and Wales.....	276,	368,	345,	341,	408,	357,
Scotland	21,	30,	32,	35,	41,	40,
Ireland	2,	2,	3,	3,	3,	4,
United Kingdom	299,	400,	380,	379,	452,	401,

* 000's omitted in statistics of looms, spindles, and persons employed, thus 25,819, = 25,819,000.

From this it will be seen that there was an increase between 1856 and 1861 of 677 factories, 2,377,250 spindles, 101,145 power looms, and 72,356 in the number of persons employed; and as it is calculated that it takes $35\frac{1}{2}$ lbs. of cotton per spindle to keep the machinery at work, the total consumptive power of the country in 1861 was equal to 1,069,628,823 lbs., = to 51,400 bales of 400 lbs. weekly.

The actual consumption of 1860 was 1,068,727,600 lbs., equal to a weekly average of 20,533,223 lbs. (Table B, Appendix); thus the consumption of cotton in 1860 apparently employed every available spindle. The value of our import of cotton in 1860 was 35,000,000*l.*, at an average price of 6½*d.* per lb.; of this we re-exported in the raw state 5,500,000*l.*, and consumed 28,900,000*l.* Table C (Appendix) shows that the estimated balance left for interest and profit of manufacture in this year was 18,078,000*l.*; this was the largest profit realised in any one year by our cotton spinners and manufacturers. In 1862, however, with the advance in the value of the raw material, all this was changed, manufacturers could no longer find buyers for the products of their spindles and looms at prices which would leave them any profit on the cost of the raw material, as will be seen from the following table of margins between cotton, yarn, and cloth:—

Years.	Mid. Orleans.	Best 8½ lbs. Shirtings per lb.	Margin.	40s Mule Yarn.	Margin.
1860	6'56	13'85	7'29	11'81	5'25
'61	9'06	13'78	4'72	12'0	2'94
'62	19'17	19'97	0'80	17'81	1'36
'63	24'35	27'51	3'16	27'37	3'02
'64	27'68	31'00	3'32	28'88	1'20
1865	19'50	24'30	4'80	21'50	2'0
'66	15'78	22'27	6'49	20'81	5'03
'67	10'84	16'72	5'88	15'44	4'60
'68	10'75	15'63	4'88	14'0	3'25
'69	12'36	15'80	3'44	16'0	3'64

The cost of spinning No. 30 yarn was 4*d.* per lb., in 1860, but owing to the increased capital employed and loss in waste, it increased to 5*d.* in 1866.

The shipments of cotton fabrics to our great eastern markets had been for some years previous to 1860 very heavy, stocks had accumulated, and merchants were unable to obtain for them an advance in price equal to the increased cost in Manchester. Manufacturers were adverse to closing their mills entirely, but they were compelled to do so partially: thus the consumption of cotton in 1862 was reduced by more than one-half, the total consumption being only 449,821,000 lbs., and the balance left on the year for interest of capital and profits dwindled down to 1,472,000*l.*; this was the worst year, as supplies of the raw material increased again under the influence of high prices, so did its consumption, which was 476,445,000 lbs. in 1863; 561,196,000 lbs. in 1864. This year practically ended the great cotton famine, which had wrought such widespread misery among the operative classes, who were thrown out of

work in tens of thousands. During the three years, ending Lady-day, 1864, the guardians of twenty-eight unions in the cotton districts disbursed for the relief of the poor 1,937,928*l.*, and the local committees 1,372,454*l.*, making a total of 3,310,382*l.*; this is a sufficient index of the distress which existed at the time, and which was not confined to the operatives only, but extended to wealthy millowners, who were ruined in their attempts to keep on manufacturing in the face of heavy losses.

Having so far traced the influence of high prices upon our cotton manufacturing industry, we must turn for a while to see their effect upon other textile fabrics. The most nearly allied to cotton in substance is linen. A great impetus was given to the manufacture of linen, and the number of acres under the cultivation of flax in Ireland, increased from 128,595 in 1860, to 301,693 in 1864; fortunately this large increased production had the effect of preventing that rapid advance in values which the demand for linen fabrics would otherwise have undoubtedly led to. In the same manner an opportune heavy import of wool kept its value within moderate compass; thus, while cotton averaged 168 per cent. higher during the seven years 1862-68 than during the previous seven years, flax and hemp were but 10 per cent., and wool 24½ per cent., dearer. This comparatively moderate range of prices naturally caused the gap caused by the diminution of the manufacture of cotton goods to be filled up to a considerable extent by woollen, worsted, and linen fabrics; thus, while the proportionate manufacture of textiles in 1856-61 averaged 72 per cent. of cotton, 15 per cent. woollen, and 13 per cent. linen, the proportion of the two latter had increased in 1868-69 to 18 per cent. respectively, while cotton had decreased to 64 per cent.; this increase in the demand for woollen and worsted fabrics, though large, is much less than might have been anticipated, and is to some extent explained by the impoverishment of the country by the panic of 1866 and two subsequent bad harvests; but even making due allowance for this, it is astonishing the supremacy which cotton continued to exert over other textiles, notwithstanding the high cost of its products.

The number of woollen spindles in work in—

	Number.	Looms.
1868 was.....	6,455,870	118,865
'61 „	3,471,781	64,818
Increase	2,984,089	54,047
„ per cent.	86	83·3

The number of flax spindles in—

	Number.	Looms.
1868 was.....	1,678,357	35,047
'61 „	1,252,236	15,347
Increase	426,121	19,700
„ per cent.	34.1	128.8

We will now pass on from the time of dearth to that of returning plenty. We still find, up to the close of 1869, the consumption of cotton overtaking the production; and in consequence, a keen competition was kept up by spinners, for the raw material, which caused its price—as compared with cotton textiles—to rule comparatively high, and the margin for the cost of manufacture was kept at a low and sometimes unremunerative point; the bad trade since 1860 had caused a diminution in our manufacturing power in some sections, particularly Scotland, the number of cotton mills given in the return for 1868 is 338 less than in that for 1861, viz. :—

Factories for spinning	51
„ weaving	81
„ spinning and weaving	48
Other factories	158
Total	<u>338</u>

But the number of spindles exhibits an aggregate increase of 1,612,547, equal to a weekly consumption of 1,088,000 lbs., or 2,735 bales of 400 lbs. weight, for although several districts showed a decrease, Lancashire gave an increase of 2,630,423 spindles. The decrease in the number of mills was due to many mills with old-fashioned machinery, and in out-of-the-way places, being closed, while the increase in the number of spindles is accounted for by the modern mills, completed during the American war, being of large size.

During the whole of this period, while American cotton was so scarce, cotton yarn and cloth had to be manufactured chiefly out of Surat and other descriptions of short-stapled cotton. Spinners incurred considerable expense in adapting their machinery to use these low classes of cotton, and there was, of course, a considerable deterioration in the quality and colour of both the yarn and cloth; various devices of bleaching and sizing were resorted to, to improve the colour of the cloth, which had a very baneful effect in causing mildew, and thus the character of our cotton manufactures have deteriorated during the past ten years; it is now improving again under the fuller supply of American cotton.

We have called the period subsequent to 1866 as one of returning plenty; we are compelled to use this qualified term, because the supply reaching our shores was not sufficient to meet the demand for consumption and export; fortunately the high prices which ruled in 1864 and 1865, greatly in excess of those warranted by the relative positions of supply and demand, so kept consumption in check, both in this country and the continent of Europe, that a sufficient stock accumulated to enable us (*i.e.*, Europe and America), during the years 1867-69, to overrun the production to the extent of 791,000 bales, or 263,660 per annum, without any material advance in price. On the 1st September, last year, however, stocks had been reduced to such a low ebb that we could no longer have continued to make up the deficiency between the supply and demand out of them; it has, however, happened most opportunely that the cotton crop in America during the past season produced over 3,000,000 bales, or an excess over the preceding year of 800,000 bales, thus not only making up the margin between the supply and demand on the basis of an average value of 11'32*d.* for American cotton, but also enabling us to add to our stocks over 300,000 bales, so that we may congratulate ourselves upon at last emerging not only from a time of famine, but from a time of returning plenty to those of such abundance that we must have a more moderate average range of values.

During the past few years we have had the value of cotton, governed not so much by the demand for its products as by the anxiety of spinners and manufacturers to keep on working, merchants have found throughout that their foreign markets were unwilling to take off the quantity of cotton fabrics shipped to them, except at a price which left a loss upon the cost in Manchester, though that price was often below the cost of production; thus the keen competition of spinners has caused us to pay a much larger price for our cotton supplies than we were warranted, looking at the price our customers were willing to pay for its products—in short, our supply of cotton has not been adequate to our manufacturing power. In 1860 we had spindle power equal to a consumption of 51,420 bales of 400 lbs. per week; in 1868-69 we had a spindle power equal to the consumption of 54,153 bales of 400 lbs.; our actual consumption in 1868 was 47,378, and in 1869 45,268 bales of 400 lbs., and it is this deficiency between the actual consumption and the spindle power that has worked so much mischief; the result has been, of course, to place all manufacturers of small capital or with old machinery in a position of being unable to manufacture, except at a very serious loss, and the deficiency in the supply of the raw material, bearing a very small proportion to the increased cost of the goods produced, compelled them to sell their products at

a loss, and to frequently adopt short time with a view of adjusting the out-turn of goods to the demand.

We have here the causes of the bad state of trade in Lancashire, during the past few years; a loss of from 10 per cent. to 25 per cent. in the producing power of the mills, and an increase in the cost of cotton fabrics of 50 per cent., which naturally very greatly restricted their sale. To see how far we have emerged from this state of things, we will examine very briefly the consumptive power of Europe and the Northern States of America, and our probable supplies of cotton now as compared with 1860, in bales of 400 lbs.

Consumptive Power, in Bales of 400 lbs.

	1860.	1870.
	Bales.	Bales.
England	2,674,072	2,816,001
Continent	1,794,000	1,944,000
America (Northern States)*	871,114	941,000
Total	5,339,186	5,701,001
Total per week	102,676	109,639
„ England per week	51,426	54,153
„ Continent „	34,500	37,584
„ America „	16,752	18,096

Supply, in Bales of 400 lbs.

	1860.	1870 (Estimated).
	Bales.	Bales.
American	5,143,347	3,287,000
India	511,000	1,200,000
Brazil	60,000	280,000
Egypt	201,000	205,000
West Indies	3,000	40,000
Total	5,918,347	5,012,000
Per week	113,814	96,384

* The consumption of the Southern States of America, and the portion of the crop taken to supply that demand are not included, as they can be only very approximately estimated.

We see from these figures that our supply of cotton this year is still 14·27 per cent. below the spindle power of Europe and the Northern States of America; the prospects are very fair, that this deficiency, which amounts to no less than 689,000 bales, may be made up during the course of the next twelve months, as the area of land under cotton cultivation, both in America and India, has been considerably increased; but until our supply of cotton is equal to the consumptive power, and we have confidence that such a supply will be kept up, we cannot expect to see the low prices which were current prior to 1861. There is a general feeling that values must return to this low level, and it is quite possible that the force of general opinion may anticipate the natural decline in values, and, by prematurely forcing them down to a low point, may give a check to production, and further postpone that full tide of plenty so essential to the prosperity of this district.

Seven pence per pound for middling quality of American was considered the normal value of cotton before the American war; this has been so far changed that it cannot even be produced to sell here under 8½*d.* per lb. (some authorities state the cost of production at a higher figure), the economy effected by the improved mode of cultivation not compensating for the increased cost of labour and provisions, it is to be hoped that, by the immigration of Northern whites and Chinese coolies into the Southern States, the cost of production may be gradually reduced; but this is a work of time, and the premature decline in values, by checking the enterprise which is thus reinforcing the labour available for cotton planting, might postpone indefinitely that regular and largely increased production we stand so much in need of.

In the same way, India has made considerable advance in cotton cultivation, though it has been at an increased cost of production, and thus a decline to low prices would probably curtail our supplies from this quarter.

At an average of about 9½*d.* per lb. for middling American, we think, sufficient profit would be returned to the cotton planter to sustain his exertions in overcoming the difficulties which have yet to be surmounted before we can be confident of a regular and reliable full supply; if we could be sure of this value being maintained, we should be confident of having such a supply within two, at the outside, three years.

This naturally leads to the further inquiry, has our manufacturing power kept pace with the demands of the world for goods at low prices? But this is a question of such magnitude, that were we to touch upon it in the most abstract form, we should trespass far beyond the length which the Association allots to a paper, and further, it would be going beyond our original intention, the object

of which was to pass under review, as briefly as possible, the writhings of a mighty commerce stricken down by the exigencies of a cruel war, to see how in such a condition of things the maxims of political economy have prevailed, how in a large trade giving employment to not less than 8,000,000 persons, and affecting the personal interests of every individual in the civilised world, "price" has adjusted supply and demand.

In bringing this paper to a close, I would desire to bear testimony to the value of the Cotton Statistics Act, but it is desirable that the form of the returns given under it should be so far altered as to give us weekly the quantity taken by consumption as well as the quantities imported and exported.

We want, however, more regular and reliable information of the manufacturing power of the country, we should not be dependent for the statistics of our greatest manufacturing industry upon the spasmodic returns of the Factory Inspectors.

APPENDIX.

TABLE A.—*Import of Cotton in the following Years.*

[000's omitted.]

Import.	1869.	1868.	1867.	1866.	1865.
<i>Descriptions—</i>	<i>Bales.</i>	<i>Bales.</i>	<i>Bales.</i>	<i>Bales.</i>	<i>Bales.</i>
American	1,040,	1,296,	1,226,	1,163,	462,
Brazil	514,	637,	437,	408,	340,
Egyptian	186,	189,	181,	167,	334,
Turkey, &c.	41,	13,	17,	33,	80,
West India, &c.	106,	101,	129,	112,	131,
Surat	1,048,	1,039,	1,095,	1,207,	957,
Madras	318,	244,	163,	294,	178,
Bengal	131,	169,	250,	347,	132,
China and Japan	—	—	2,	19,	142,
Total bales	3,383,	3,660,	3,500,	3,749,	2,756,
Total weight in lbs.	1,198,355,	1,296,958,	1,275,217,	1,356,952,	965,727,

Import.	1863.	1862.	1861.	1860.
<i>Descriptions—</i>	<i>Bales.</i>	<i>Bales.</i>	<i>Bales.</i>	<i>Bales.</i>
American	132,	72,	1,842,	2,581,
Brazil	138,	134,	100,	103,
Egyptian	204,	132,	92,	109,
Turkey, &c.	44,	15,	1,	—
West India, &c.	23,	20,	10,	10,
Surat	899,	915,	907,	508,
Madras	177,	124,	80,	55,
Bengal	153,	30,	—	—
China and Japan	162,	3,	—	—
Total bales	1,982,	1,445,	3,032,	3,366,
Total weight in lbs.	703,307,	533,224,	1,359,823,	1,429,697,

TABLE B.—Consumption of Cotton in the following Years.

[000's omitted.]

Consumption.	1869.	1868.	1867.	1866.	1865.
<i>Descriptions—</i>	<i>Bales.</i>	<i>Bales.</i>	<i>Bales.</i>	<i>Bales.</i>	<i>Bales.</i>
American	912,	1,112,	1,066,	931,	281,
Brazil	443,	598,	323,	290,	219,
Egyptian	183,	184,	158,	162,	297,
Turkey, &c.	38,	15,	13,	27,	79,
West Indian, &c.	93,	92,	99,	93,	109,
East „	959,	801,	891,	922,	876,
China and Japan	—	—	1,	10,	174,
Total bales	2,628,	2,802,	2,553,	2,435,	2,035,
Total weight in lbs.	941,586,	985,476,	955,273,	915,749,	718,428,
Average per week in bales	51,	54,	49,	47,	39,
„ lbs.....	18,107,	18,951,	18,376,	17,611,	13,816,

Consumption.	1863.	1862.	1861.	1860.
<i>Descriptions—</i>	<i>Bales.</i>	<i>Bales.</i>	<i>Bales.</i>	<i>Bales.</i>
American	120,	251,	1,810,	2,137,
Brazil	112,	101,	85,	113,
Egyptian	238,	121,	109,	94,
Turkey, &c.				
West Indian, &c.	16,	15,	13,	6,
East „	893,	698,	349,	174,
China and Japan				
Total bales	1,739,	1,186,	2,366,	2,524,
Total weight in lbs.	467,184,	414,905,	988,052,	1,068,728,
Average per week in bales	26,	23,	45,	49,
„ lbs.....	8,984,	7,979,	19,001,	20,533,

TABLE C.—An Estimate of the Weight and Value of the Total Production of Balance Remaining for Interest of Capital

[000's omitted, thus 825,027, = 825,027,000.]

Particulars as to Quantity.	1860.	1861.	1862.	1863.
	lbs.	lbs.	lbs.	lbs.
Cotton consumed	1,079,321,	1,005,477,	449,821,	476,445,
Waste in spinning	113,328,	105,575,	76,469,	71,466,
Yarn produced	965,993,	899,902,	373,352,	404,979,
<i>Yarn appropriated—</i>				
Exported	197,343,	177,848,	88,554,	70,678,
" in piece goods, &c.	542,770,	496,284,	324,128,	321,561,
Retained for home consumption and stock	225,880,	225,770,	39,330,*	12,740,

Particulars as to Value	1860.	1861.	1862.	1863.
	£	£	£	£
Declared value of yarn exported	9,870,	9,292,	7,523,	8,679,
" piece goods, apparel, &c.	46,248,	41,514,	38,616,	49,046,
Estimated value of home consumption	24,470,	23,525,	3,413,*	2,070,
Total value of goods produced	80,588,	74,331,	42,726,	59,795,
Cost of cotton consumed	28,910,	32,205,	26,734,	40,689,
Paid in wages and other expenses	33,600,	31,360,	14,520,	15,690,
Total expenditure	62,510,	63,565,	41,254,	56,379,
Balance left for interest of capital and profits	18,078,	10,766,	1,472,	3,416,

* Excess of export over

D.—The Weight of Yarns and Goods Produced, the Quantities Exported

[000's omitted, thus 178,000, = 178,000,000.]

	1860.	1861.	1862.	1863.
	lbs.	lbs.	lbs.	lbs.
Stock on hand 1st January	189,120,	242,000,	293,770,	152,440,
Yarn and manufactures produced	965,993,	899,902,	373,352,	404,979,
Total supply	1,155,113,	1,141,902,	667,122,	557,419,
Yarns and goods exported	740,118,	674,132,	412,682,	392,239,
Estimated actual home consumption	178,000,	174,000,	102,000,	98,000,
Total deliveries	913,113,	848,132,	514,682,	485,239,
Stock on hand 31st December	242,000,	293,770,	152,440,	72,180,
" of cotton held by the trade on 31st } December	86,100,	37,600,	18,000,	18,000,
" in the ports, 31st December	250,549,	279,207,	164,599,	119,667,
Estimated total weight of yarns, goods, } and cotton, 31st December	578,649,	610,577,	335,639,	209,847,

Cotton Manufactures in Great Britain, with the Cost of Production, and the and Profits for each of the past Ten Years.

[000's omitted, thus 825,027, = 825,027,000.]

1864.	1865.	1866.	1867.	1868.	Particulars as to Quantity.
lbs.	lbs.	lbs.	lbs.	lbs.	
561,196,	718,651,	890,721,	954,517,	996,197,	Cotton consumed
78,567,	100,611,	115,798,	114,533,	119,544,	Waste in spinning
482,629,	618,040,	774,928,	839,984,	876,653,	Yarn produced
					<i>Yarn Appropriated—</i>
71,951,	98,563,	134,889,	164,276,	169,410,	Exported
332,048,	377,357,	490,713,	523,582,	550,093,	" in piece goods, &c.
78,630,	142,120,	149,326,	152,126,	157,150,	Retained for home consumption and stock

1864.	1865.	1866.	1867.	1868.	Particulars as to Value.
£	£	£	£	£	
9,467,	10,351,	13,598,	13,690,	14,684,	Declared value of yarn exported
53,100,	51,006,	66,146,	57,382,	87,449,	" piece goods, apparel, &c.
13,740,	21,910,	23,020,	19,363,	19,153,	Estimated value of home consumption
76,307,	83,266,	102,763,	90,435,	91,286,	Total value of goods produced
52,462,	47,257,	51,958,	41,262,	40,989,	Cost of cotton consumed
18,680,	23,850,	31,288,	33,338,	34,910,	Paid in wages and other expenses
71,142,	71,107,	83,246,	74,600,	75,929,	Total expenditure
5,165,	12,159,	19,517,	15,383,	15,357,	Balance left for interest of capital and profits

production to be deducted.

and Consumed at Home, and the Stock on Hand at the Close of each Year.

[000's omitted, thus 178,000, = 178,000,000.]

1864.	1865.	1866.	1867.	1868.	
lbs.	lbs.	lbs.	lbs.	lbs.	
72,180,	40,810,	32,930,	37,416,	44,512,	Stock on hand 1st January
482,629,	618,040,	774,928,	839,984,	876,653,	Yarn and manufactures produced
554,809,	658,850,	807,858,	877,400,	921,195,	Total supply
403,999,	475,920,	625,602,	687,858,	719,503,	Yarns and goods exported
110,000,	150,000,	145,000,	145,000,	160,000,	Estimated actual home consumption
513,999,	625,920,	770,602,	832,858,	879,503,	Total deliveries
40,810,	32,930,	37,256,	44,542,	41,692,	Stock on hand 31st December
31,564,	32,868,	45,301,	30,252,	28,953,	{ " of cotton held by the trade on
194,482,	149,776,	209,822,	191,415,	178,280,	31st December
					" in the ports 31st December
266,856,	215,574,	292,379,	266,209,	248,925,	{ Estimated total weight of yarns, goods, and
					cotton, 31st December

PROCEEDINGS OF THE STATISTICAL SOCIETY.

SESSION 1869-70.

First Ordinary Meeting, Tuesday, 16th November, 1869.

William Newmarch, Esq., F.R.S., President, in the Chair.

The following Gentlemen were elected Fellows of the Society,
viz.:—

Gabriel Goldney, M.P.	Christopher Weguelin.
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The following Paper was read:—

An Inaugural Address “On the Progress and Present Condition
“of Statistical Inquiry.” By the President.

Second Ordinary Meeting, Tuesday, 21st December, 1869.

William Newmarch, Esq., F.R.S., President, in the Chair.

The following Gentlemen were elected Fellows of the Society,
viz.:—

Alfred Hutcheson Smee.	Dr. William Robert Macanlay.
Samuel Ingall.	John Oldfield Chadwick.
James Muir Davies.	Sir Massey Lopes, Bart.
Cornelius Inglis.	Hammond Chubb.
Hon. Henry Nicholas Duverger Beyts.	

The following Papers were read:—

Report “On the Seventh International Statistical Congress.”
By Mr. Samuel Brown.

“On House Accommodation in England and Wales, in relation
“to the Census of 1871.” By Mr. R. H. Inglis Palgrave.

Third Ordinary Meeting, Tuesday, 18th January, 1870.

William Newmarch, Esq., F.R.S., President, in the Chair.

The following Gentlemen were elected Fellows of the Society,
viz.:—

Iltudus Thomas Prichard.	James MacLagan.
Henry Hoare.	Josiah Samuel Parker.

The following Paper was read:—

“On the Statistics of Joint Stock Companies from 1814 to the
“Present Time; and of Companies with Limited and Unlimited
“Liability, formed since the Year 1856.” By Professor Levi.

Fourth Ordinary Meeting, Tuesday, 15th February, 1870.

William Newmarch, Esq., F.R.S., President, in the Chair.

The following Gentlemen were elected Fellows of the Society,
viz.:—

Fountain John Hartley.	John Hewitt.
H. R. Williams.	

The following Gentlemen were elected Foreign Honorary Members, viz.:—

Hon. David Wells, Washington, United States.		Clement Juglar, Paris. J. Sanford, Boston, United States.
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The following Gentlemen were elected Corresponding Members, viz.:—

Hon. T. J. Hovell-Thurlow, The Hague. | A. Mansolas, Athens.

The following Paper was read:—

“On International Coinage and Foreign Exchanges.” By Mr. Ernest Seyd.

Fifth Ordinary Meeting, Tuesday, 15th March, 1870.

William Newmarch, Esq., F.R.S., President, in the Chair.

The following Gentleman was elected a Fellow of the Society, viz.:—

John Muir Leitch.

The following Paper was read:—

“On the Finances of the Free Church of Scotland.” By the Rev. Dr. Buchanan.

Sixth Ordinary Meeting, Tuesday, 19th April, 1870.

William Newmarch, Esq., F.R.S., President, in the Chair.

The following Gentleman was elected a Fellow of the Society, viz.:—

Salomon Weil.

The following Paper was read:—

“On our Home Monetary Drains, and the Crisis of 1866.” By Mr. R. H. Patterson.

Seventh Ordinary Meeting, Tuesday, 17th May, 1870.

William Newmarch, Esq., F.R.S., President, in the Chair.

The following Gentlemen were elected Fellows of the Society, viz.:—

Felix Henry Gottlieb. | William P. Pattison.

The following Paper was read:—

“On the Incidence of Local Taxation in the United Kingdom.” By Professor J. E. Thorold Rogers, M.A.

Eighth Ordinary Meeting, Tuesday, 21st June, 1870.

William Newmarch, Esq., F.R.S., President, in the Chair.

The following Gentleman was elected a Fellow of the Society, viz.:—

Eugene Absolon.

The following Paper was read:—

“On Free Libraries.” By Mr. W. E. A. Axon.

BRITISH ASSOCIATION, 1870.

*FORTIETH Meeting of the BRITISH ASSOCIATION for the Advancement
of Science, held at LIVERPOOL, 14th—21st September, 1870.*

Section F.—Economic Science and Statistics.

President.—Professor W. Stanley Jevons, M.A.

Vice-Presidents.—Sir J. Bowring; the Earl of Derby; Dr. Wm. Farr; Principal Greenwood; James Heywood, M.A.; Lord Houghton; Sir Stafford Northcote, Bart., M.P.; Professor Bonamy Price; Sir J. Kay Shuttleworth, Bart.; Professor Waley.

Secretaries.—R. Dudley Baxter, M.A.; Edmund Macrory, M.A.; John Miles Moss, M.A.

Committee.—H. G. Bohn; W. Botley; C. H. Bracebridge; Frederick J. Bramwell; H. A. Bright; J. T. Danson; Henry S. Ellis; F. P. Fellowes; Rev. G. Gould; — Grantham; A. Hamilton; W. N. Hancock, LL.D.; Professor Henry; Dr. W. B. Hodgson; William Hope; Rev. Dr. Hume; A. Kinnaird, M.P.; Sir John Lubbock, Bart., M.P.; A. J. Macrory; Thomas de Meschin, LL.D.; J. Murch; E. Muspratt; Lord Neaves; J. H. Orpen, LL.D.; R. H. Inglis Palgrave; T. B. Sprague; R. Wilkinson.

The following Papers were read in the Section:—

Thursday, 15th September.

The President's Opening Address.

Frank P. Fellows.—Our Navy.

George Campbell, D.C.L.—The Duties of the Government of India and of the Merchants of England, in promoting Production in India.

Dr. de Meschin.—The Impolicy, on Economic Grounds, of Converting the National Debt into Terminable Annuities.

Friday, 16th September.

Report of the Committee on Uniformity of Weights, Measures, and Coins in the Interest of Science.

W. Westgarth.—On Decimal Money and a Common International Unit.

G. Johnstone Stoney, M.A., F.R.S.—On the Effect upon the Value of the Standard Coin of a Mint Charge.

William Botly.—On the Economy of Large and Small Farms.

W. B. Forwood.—On the Influence of Price upon the Cultivation and Consumption of Cotton during the Ten Years 1860 and 1870, including the Period of the Cotton Famine.

Robert T. Saunders.—The Physical Geography of the United States of America as affecting Agriculture, with Suggestions for the Increase of the Production of Cotton.

Saturday, 17th September.

James Heywood, M.A., F.R.S.,—On the Aptitude of North American Indians for Agriculture.

Thomas Rose.—On the Utilisation of Fibrous Cotton Seed.

Dr. Pankhurst.—On the Policy and Provisions of a Patent Law.

E. Renals.—On Mechanics' Institutions and the Elementary Education Bill.

Monday, 19th September.

Dr. Wm. Farr, F.R.S.—Moved a Resolution relating to the Adoption of the Metric System of Weights, Measures, and Coins.

R. Wilkinson.—Statistics on Tobacco, its Use and Abuses.

J. P. Campbell.—On the Tobacco Trade of Liverpool.

Rev. John Jones.—Intemperance—purely with reference to Liverpool.

T. A. Welton.—On Emigration and Immigration as regards the United Kingdom.

Alfred Haviland.—On a Proposed Rearrangement of the Registration Districts of England and Wales for the purpose of Facilitating Scientific Investigation.

Tuesday, 20th September.

Berkeley Hill, M.B.—Statistical Results of the Contagious Diseases Acts. (At 1 o'clock, P.M.)

The President.—To move a Resolution with regard to the Approaching Census.

R. Dudley Baxter, M.A.—National Debts.

Wednesday, 21st September.

C. H. W. Biggs.—Middle Class Schools as they are; as they ought to be.

O. Williams.—Local Taxation.

Hyde Clarke.—Proposition for a Census of Local Names.

John Patterson.—Remarks on Railway Accounts, A.D. 1868, with some Suggestions for Railway Reform.

J. Parry.—On Baths and Washhouses.

J. Walter Ellis.—On the Decline of Small Farmers in Yorkshire and Lancashire; the Cause and Effect.

Dr. de Meschin.—On the Compulsory Conversion of Substantial Leasehold in Towns into Freeholds.

MISCELLANEA.

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I.—Synopsis of Local Taxes Levied in Rateable Districts.

THE following exhaustive description of this division of English local rates is taken from the report drawn up by the Right Hon. G. J. Goschen, as chairman of the Select Committee on Local Taxation, and recently issued. The amount of these imposts severally, and in the aggregate, will be found in the Appendix to Professor Rogers's paper, *ante*, pp. 258—263:—

The principal points upon which your committee have sought for and obtained information, are the following:

- (A). The various kinds of local rates which are leviable.
- (B). The purposes for which they are levied.
- (C). The authorities by whom they are levied and expended.
- (D). The manner in which those authorities are constituted.
- (E). The persons by whom the several rates are paid.
- (F). The difference in the scale of contribution; and
- (G). The incidence of the rates, with respect to occupiers and owners generally.

- (A). The various rates leviable.

The following statement shows the principal rates levied for local purposes:—

CLASS I.

Rates levied in primary districts such as a parish.

1. The *Poor Rate*.
2. „ *Highway Rate*.
3. „ *Burial Board Rate*.
4. „ *Lighting and Watching Rate*.
5. „ *General District Rate*.
6. „ *Sewerage Rate*.
7. „ *Towns Improvement Rates*.
8. „ *Animal Contagious Diseases Rate*.
9. „ *Church Rate*.
10. „ *Sewers* „
11. „ *General Sewers Tax*.
12. „ *Drainage, Embankment, and Inclosure Rates*.

CLASS II.

Rates levied in aggregate districts, such as a county :—

1. The *County Rates*.
2. „ *Hundred Rate*.
3. „ *Borough Rates*.

A complete list of the several local rates will be found appended to the evidence of Mr. Danby P. Fry.*

(B). Purposes for which the rates are levied.

The names of many of the rates mentioned in the foregoing statement show the chief purposes to which they are applicable; but with respect to some of them further explanation is required.

In the first place it is important to distinguish between that portion of the poor rate which is applied specially for purposes connected with the relief of the poor, and the remaining portion which is devoted to paying the contribution required from the overseers for the county, borough, and other rates, totally unconnected with poor relief.

It has long since been the practice of Parliament to provide for the levy, through the poor rate, of the sums required for many other local purposes, owing to the facilities afforded for raising contributions in that manner. In the year ended Lady-day, 1869, upwards of 4,000,000*l.* sterling, out of the amount levied under the name of poor rate, were expended on other objects than the relief of the poor.

The chief expenditure which the *County Rates* are intended to cover may, as a rule, be taken to be that in respect of county bridges, gaols, and shire halls, county lunatic asylums, and county police. But there are many other objects which, in the aggregate, form a large portion of the entire expenditure.

The *Hundred Rate* is, as its name shows, limited to hundreds, and it is now only leviable for the purpose of making good damage to property in cases of riot.

The *Borough Rates* are levied in municipal cities and boroughs in which the county justices have either no jurisdiction or a partial jurisdiction only; and they embrace, to a great extent, similar objects to those provided for by the county rates.

The *General District Rate*, which is levied by local boards under the Public Health and Local Government Acts, is applied in defraying the expenses of making and maintaining sewers and drains, public streets and highways, and various works of towns improvement; and the rates levied by the Metropolitan Board of Works and the several district boards in the metropolis are for the most part applied towards similar objects.

The *Sewers Rate* is not, as its name would seem to imply, levied for the purposes of sewerage, as that term is now understood, but for works of drainage and embankment.

A more detailed explanation of the purposes to which the several

* See *Report of Select Committee*, p. 291 *et seq.*

local rates are applied, is given in the statement handed in by Mr. Fry, and already referred to.

(C). Authorities by whom the local rates are levied and expended.

It will be convenient to divide the principal local rates into two classes, for the purpose of distinguishing those levied by one authority and expended by another, from those which are levied and expended by the same authority. The former may be termed precept rates.

1. *Precept Rates.*

The *Poor Rate* is made and assessed by the overseers, who are annually appointed by the justices; but only a small portion of the amount is expended by them or subject to their control.

The sums required by the guardians for the relief of the poor are contributed upon the orders of the guardians, which orders the overseers themselves have no alternative but to obey.

In like manner, the sums required for the county rate are paid over to the county treasurer by the overseers, sometimes directly, but generally through the board of guardians, upon the precepts of the county justices. A similar course is pursued with respect to the hundred rate.

The *Borough Rate* also, whether paid out of the poor rate, or levied as a separate rate, is paid over by the overseers upon the precept of the town council.

The *Highway Rate*, in highway districts, is paid by the overseers out of the poor rate, except in certain exceptional cases, when the rate is levied by the waywarden, and paid over by him on the precept of the highway board.

The *Burial Board Rate* is paid by the overseers, on the certificate of the burial board, in those cases where the board is elected under the Burial Acts. In other cases it is either collected as a separate rate, or paid out of the general rate of the authority acting as the burial board.

The *Lighting and Watching Rate* is levied in parishes which have adopted the 3 and 4 Wm. IV, cap. 90.

The expenditure under this Act is under the control of inspectors appointed by the ratepayers, subject to the restriction that a limit is annually fixed by the ratepayers, beyond which no expenditure can be incurred. The amount necessary to meet the expenditure is raised by the overseers, who, upon the order of the inspectors, levy a separate rate for the purpose.

The *Library and Museum Rate*, and the *Baths and Washhouses Rate*, are sometimes paid out of the borough rate, which is itself a precept rate, and sometimes assessed separately as precept rates. In other cases they are paid out of the general rate of Improvements Commissioners, or other local boards, and in some instances they are levied by the authority directly entrusted with their expenditure.

The following rates also come within the category of precept rates, viz.:—

(a). The *Consolidated Rate of the Metropolitan Board of Works.*

(b). *Rates for defraying the expenses of district boards and vestries under the Metropolis Local Management Act.*

(c). *The Metropolitan Police Rate.*

The *Consolidated Rate of the Metropolitan Board of Works* is contributed upon the precept of the board by the several district boards and vestries in the metropolis, who in their turn obtain the sums required by them both for this rate and the rates expended by themselves by precepts addressed to the overseers. In the case of the city of London, the precept for the consolidated rate of the Metropolitan Board of Works is addressed to the chamberlain of the city of London, and special provision is made for the assessment and collection of the rate in places where no poor rate is levied.

The *Metropolitan Police Rate* is paid by the overseers upon the warrant of the Chief Commissioner of Police.

2. *Rates other than Precept Rates.*

The *Highway Rate*, when levied in parishes not within a highway district, is made and assessed by the surveyor of highways, who is annually appointed by the vestry. The vestry, however, do not appear to have any direct control over the expenditure, and the only checks upon the surveyor are his annual appointment, and the power which the justices possess of disallowing improper items in his accounts.

The *Church Rate*, which no longer exists as a compulsory rate, except where it is continued for the purposes of liquidating existing charges, is made and collected by the churchwardens upon the resolution of the vestry.

The *Sewers Rate* and the *General Sewers Tax* are levied by the Commissioners of Sewers appointed under the 23 Henry VIII, cap. 5, and are collected by officers specially appointed by the Commissioners.

Drainage, Embankment, and Inclosure Rates are levied and expended under various local Acts by the local authorities constituted by those Acts.

The *General District Rate* is levied by local boards constituted under the Public Health Act and the Local Government Act.

The *Towns Improvement Rates*, in like manner, are levied by Improvement Commissioners appointed under various local Acts, and the Towns Improvement and Police Clauses Act (1847), where those Acts have been adopted.

[It should be borne in mind that in addition to the taxes named above, a considerable revenue is obtained for local objects from turnpike trusts, harbour dues, tolls, &c. In the metropolis a large income is derived from the coal and wine duties gathered by the city of London.—ED. S. J.]

II.—Gold Standard for an International Coinage.

LETTER addressed to the Editor of the *Economist* by Mr. Frederick Hendriks on the 29th June last :—

"The following details, based upon public and other sources of information, may interest your readers in anticipation of the publication of the report of the High Council of Commerce, now shortly expected :—

"The main questions considered were as follows :—(1). Would the coinage of a French 25-franc gold piece be useful ? (2). Would the adoption of a single gold standard be preferable to the existing double or alternate standard of gold and silver ? (3). In case of affirmation of the superiority of the single standard, what measures should be taken with regard to the silver 5-franc pieces, the only subsisting representative of the double standard in the monetary system of France.

"The witnesses were thirty-seven in number. They included men representing all shades of opinion. As a proof of the impartiality with which the inquiry was conducted, it suffices to mention that the roll of witnesses includes the names of the Governor of the Bank of France, M. Rouland, and three of the Regents, de Waru, de Rothschild, de Plœuc ; Messrs. Le Touzé, Lalou, Carlhian, Hendriks, André, Feer-Herzog, Seyd, Tolhausen, Wolowski, Blaise des Vooges, Verdé-Delisle, Léon, Lévasscur (of the Institute), Clement-Juglar, Broch (Minister of Norway), Barthélemy St. Hilaire (deputy), J. Garnier, Wallenberg (director of the Bank of Stockholm), Marquis d'Audiffret, Sacerdoti (of Padua), &c. An analysis of the evidence of the thirty-seven witnesses shows that thirty were in favour, and seven opposed, to the striking of a 25-franc piece. And on the question of a single gold standard twenty-three were in its favour, twelve against, and two doubtful.

"The High Council consisted of ministers and high functionaries, with the addition of special commissioners representing commerce and manufactures. The results of their voting show that they have agreed with the majority of the witnesses, and have adopted their recommendations. Messrs. de Lavenay, Michel Chevalier, Marshal Vaillant (Minister of the Emperor's household), Barbet, Bonnet, Ozenne, Picard, Bordet, Audibert, De Parieu (Minister President of the Council of State), Vitu, Darimon, Arné, have voted for the single gold standard, which they consider indispensable for the future of monetary unions. The Minister of Commerce, M. Louvet, was inclined to agree in this opinion, if a reform in that direction be (as the English Chancellor of the Exchequer rightly says it is) indispensable to the success of a monetary convention being brought about between England, France, and the United States. The only voters against the adoption of the single standard, and in favour of the maintenance of the *status quo* as regards the standard, were MM. Dumas (commissioner for the French Mint), Cornudet, Zœpfel, and Clerc. M. Magne (the late Minister of Finance) did not vote, but has expressed his views in writing. It is understood that he is in favour of maintaining the existing 5-franc silver piece, and in favour of the 25-franc gold piece being coined to a limited extent, and as a tentative measure. But the majority of the Council decided in favour of the 25-franc gold piece without any such qualifications of limited issue. Even some of the advocates of a double standard coincided in the latter view. The exceptions were Messrs. Chevalier, Barbet, Cornudet, Bonnet, and Audibert, chiefly on the ground of fear that the 25-franc gold piece would some day oblige France to give up its system of counting in francs by becoming *the* unit of international account.

"The questions of the single gold standard and of the coinage of a piece of 25 frs. being thus determined affirmatively, the Council then had to vote upon the demonetisation of the silver 5-franc pieces, the representative sign in France of the double standard. This demonetisation, which would take effect upon considerable masses of coin, although its amount has been exaggerated, could not be accomplished very rapidly, except at considerable expense, and the attention of the Council was directed to the transitional measures that might be adopted in arriving at this result without much loss, and in avoiding the increase of this stock of silver by a prolongation of the existing legislation. The partisans of the single standard of gold advocated the cessation of coinage of the 5-franc pieces of silver, as an unlimited issue of them could not co-exist with a single standard. The partisans of the double standard seem, in the person of some of their leading representatives, to have abandoned the rigorous application of their principles, and to have indirectly admitted that the legislation respecting the double standard as it now exists, presents dangers to the monetary circulation, for Messrs. Dumas and Clerc were in favour of suspending the coinage of silver 5-franc pieces, and M. Cornudet of limiting their issue. M. Michel Chevalier, although he voted for the single gold standard, recommended the unlimited coinage of 5-franc pieces of their present weight and fineness as a *commercial* money, without legal tender in the interior of France, basing his recommendation on the demands of the Oriental commerce of the future being likely to call for coins of this type.

"The Council differed from M. Chevalier, for it voted by a large majority the discontinuance of the coinage of silver 5-franc pieces. As to the pieces still in circulation, it was suggested by M. de Lavenay, President of a Section of the Council of State, that the legal tender of silver 5-franc pieces might, as a transitional measure, be limited to sums under 100 frs. The Council appear, however, to have been in favour of preserving the unlimited legal tender of the existing stock of silver 5-franc pieces, as a temporary measure, so as to prevent the difficulties that would otherwise arise as between the Bank and Treasury in France, leaving it to trade to exhaust by degrees, for purposes of export trade and of manufacture, the over supply of silver coin now existing in France. Thus the demonetisation of the 5-franc pieces would be an automatic, self-adjusting, process, which would not occasion any loss to the State.

"The details of the voting of the Council are abridged from *Le Français* of Friday last. We may assume the information as correct. It now rests with the French Government to give active effect to the recommendations of the High Council of Commerce. The publication of the report will, we may confidently expect, give a great impulse to the solution of the International Coinage question in Germany, the United States, and England. The probability is that not one of these three great commercial nations will find it either convenient or consistent with its interests to remain outside the circle of this reform. No sooner was the English Coinage Act of this Session passed, than a letter was addressed by the Secretary of the Treasury of the United States to the Chairman of the Committee of Finance, communicating an able report of Mr. John Jay Knox in relation to a proposed revision of the United States mint and coinage laws. A Bill had also been introduced, in March last, into the House of Representatives by the Hon. S. Hooper, for reducing the weight of the gold coin of the United States to that of France and of the other continental nations included in the Convention of December, 1865. In Canada a Committee of the Senate has reported that the Canadian silver coins about to be struck are to be of a decimal character, and of denomi-

nations and intrinsic value such as will serve for subdivisions of the proposed 25-franc piece, if established as an international standard, as well as of the sovereign and of the 5-dollar (or half-eagle) gold piece, when assimilated to the 25-franc piece exactly. Alive to the importance of the question, Prussia (according to her official journal of 11th June inst.) has invited to a meeting to be held at Berlin, a commission, including representatives from Prussia, Saxony, Hamburg, Bremen, Hesse, Brunswick, &c., to hear witnesses and report upon the triple programme—(1). Of establishing a national and uniform system of coinage, based on a decimal division. (2). Of creating a money of gold for circulation, either upon the single standard of gold, or else by taking the fixed double standard simply as a means, transitionally, for passing to a single gold standard, by fixing the relation of value between the two metals at $1 = 15'5$, or $1 = 15'55$, or even $1 = 15'75$. (3). Of putting the German monetary unit into harmony with the units of other countries, either by adopting the franc system, such as it is, or else by basing the system on a gold coin of the value of 25 frs., which would lead to the following subdivisional units:—the gold thaler of 5 frs.; the gold florin of two-thirds of a thaler; the mark of one-third of a thaler. (4). Of introducing the gold crown, chiming in with the metric system of weights.

"It is to be hoped that the practical sense of the German Monetary Congress of Berlin will dissipate the illusion of the gold crown. Its signal practical failure in the German experience of the past, and the discomfiture of its analogous decagram of gold at all the Monetary Conferences at Paris, ought to be sufficient to indicate its want of feasibility.

"On the whole, the friends of international coinage have reason to be satisfied with the impulse given to it by the French monetary inquiry of 1870. Its meetings were ably presided over, with dignity and courtesy combined, by M. Lottet, the Minister of Agriculture and Commerce, and the utmost patience was exercised in listening to arguments based on every class of opinion. So full indeed were the discussions on certain points, that they may be said to have been well nigh exhaustively conducted. A few points still, however, remain for discussion at some further special and strictly international conference, particularly upon identical mint regulations and mint charges in all countries. A full consideration of the question of seignorage as a sustentation fund for keeping up the quality of the coinage is also essential. In England we have experience of the necessity for this, whilst on the Continent their new and much larger amount of gold currency has not yet made the question one of urgency. This question has hitherto been more fully studied in England than abroad, but signs of progress in that direction will be found in some of the evidence given in Paris. There is every disposition amongst foreign nations to assimilate their monetary and mint systems, and to make mutual concessions on minor points. It is to be hoped that we in England may not lag last in this good endeavour."

III.—*The Census of Irish Paupers.*

From the *Pall Mall Gazette* :—

"Greatly exaggerated statements of the number of criminals, paupers, vagrants, and such like pests of the commonweal are not unfrequently put forth. We shall not be suspected of attaching too little importance to these troublesome factors

of our social system, nor of wishing to extenuate the evil of their existence by deprecating exorbitant estimates of our dangerous classes. On the faith of official statistics, it used to be stated some years ago that a *ninth* or a *tenth* of the English population were paupers. After a while the poor law authorities found that they had been counting their charges upon a wrong principle; and when they amended the enumeration, discovered that the proportion of the rate-supported to the self-supported population of the kingdom, was scarcely half so great as was represented.

"Last year, notwithstanding the great development of pauperism which has been going on lately, the proportion to the population, according to Mr. Goschen, was 1 in 21, or 4·7 per cent. Irish poor law statistics afford an apt illustration of this subject. During the year which ended at Michaelmas last, 285,378 persons had been relieved in Ireland at the expense of the rates. The majority were maintained in the workhouses, and about 50,000 were out-door paupers. The population of Ireland at the last census was 5,799,000. The persons relieved in-door and out during the year 1869, give a ratio upon that number of 1 in 20—a proportion, as we shall find, much in excess of the truth, which can only be arrived at when both the paupers and the general population are enumerated upon the same principle. For a valid comparison the paupers, as well as the other classes of the people, should be counted on one day. The Dublin office very properly do this for the workhouse population by showing the average daily number of paupers upon the books.

Number of Persons Relieved in the Irish Workhouses during the Years ended Michaelmas, 1868 and 1869; also the Daily Average Number in the Workhouses during those Years.

Provinces.	1868.		1869.	
	Number of Persons Relieved during the Year.	Average Daily Number Relieved.	Number of Persons Relieved during the Year.	Average Daily Number Relieved.
Ulster	66,394	11,746	58,317	11,535
Munster	80,286	18,893	77,246	18,576
Leinster.....	108,481	16,916	79,492	16,276
Connaught	24,792	6,122	20,507	5,857
Total	288,953	53,677	235,562	52,244

"The number of individuals relieved during each year was, therefore, about five times the daily average. The difference is easily explained. Say, for example, that A, B, and C are in the workhouse during all January, but that they are replaced by D, E, and F in February. These, in turn, fall into the industrial ranks, while G, H, and I enter the house and remain there during March. Now, it is here plain that during the three months nine individuals have been relieved in the workhouse, but that the average number of paupers has only been three daily. In 1868 the daily average in the workhouses appears to have been, for all Ireland, 18 per cent. upon the aggregate number of individuals relieved during the year, and 22 per cent. in 1869. The table shows there was a large decrease of individual recipients, but only a moderate diminution in the daily average during 1869.

"We note also that while the daily average last year was 52,244 in-door paupers, the highest number occurred at the commencement of March, namely, 59,024; and the lowest at the beginning of September, namely, 43,657. The relation of the average to the aggregate pauperism, varies in the different provinces. Thus the figures for 1869 give 20 per cent. for Ulster, 24 per cent. for Munster, 20½ per cent. for Leinster, and 29 per cent. for Connaught. Assuming the same proportion of the average to the aggregate pauperism for the out-door as for the in-door poor, the daily mean of both classes would be 63,000, or about 1 in 90 of the Irish population. Therefore differing greatly from the rates computed upon the aggregate numbers instead of the daily average."

IV.—Wages in Australia.

FROM the *Melbourne Argus*, 18th June :—

"During the last month there has been a rather slack demand for labour in most trades. This has been owing in a measure to the completion of many of the large contracts in Melbourne and the suburbs; and, as we are now in the depth of winter, there are not many fresh works commenced. This has been the cause of a considerable number of tradesmen being temporarily out of employment, and advantage has been taken of this fact at all the meetings held for the purpose of discouraging immigration to represent the existing temporary depression as the ordinary state of the labour market. At these meetings statements are constantly made with regard to the number of persons out of employment in the various trades entirely at variance with the facts. One speaker at a public meeting stated that so great was the depression in trade, that one large clothing manufacturer's firm had lately discharged 500 girls from their employment in one day; and, at the same time, we are assured on the best authority that no individual firm in Melbourne or the suburbs, has employed more than 350 hands, male and female, during the last year. As a rule, really good tradesmen can always find ready employment; but a large portion of our artisans have only taken up a trade, and not been brought up tradesmen; hence, whenever business gets slack, these men who, according to the rule of the trade, receive as much wages as the best men, are discharged. At present the demand for ordinary labourers is slack, owing to the wet weather and the temporary stoppage of many large public works. As soon as the railworks are commenced, there will be a large demand for labouring men. The continued rain has also seriously interfered with farming operations, the land being too wet to get the crop in. The demand for household servants has been met pretty fairly, and the rates are maintained.

"*Domestic servants for town.*—Housemaids, 20*l.* to 30*l.* per annum; female cooks, 35*l.* to 40*l.* per annum; male ditto, 20*s.* to 60*s.* per week; nursemaids, 20*l.* to 30*l.* per annum; laundresses, 30*l.* to 40*l.* per annum.

"For hotels.—Cooks, male and female, 50*l.* to 100*l.* per annum; housemaids, 30*l.* to 35*l.* per annum; grooms, 15*s.* to 20*s.* per week.

"For stations.—First class married couples for home stations, 60*l.* to 80*l.* per annum; second class ditto, 50*l.* to 60*l.* per ditto; cooks, 40*l.* to 50*l.* per ditto; housemaids, 30*l.* to 35*l.* per ditto; nursemaids, 25*l.* to 30*l.* per ditto; grooms, 40*l.* to 55*l.* per ditto.

"For farms.—Cooks, 30*l.* to 40*l.* per annum; married couples, 40*l.* to 50*l.* per ditto; general female servants, 30*l.* to 35*l.* per ditto.

"*Station Hands.*—Married couples for out stations, 40*l.* to 50*l.* per annum; shepherds, first class, 35*l.* to 45*l.* ditto; hutkeepers, 25*l.* to 30*l.* ditto; general station hands, 15*s.* per week; lads, 10*s.* per week.

"*Farm Servants.*—Ploughmen, 15*s.* to 20*s.* per week; horse drivers, 15*s.* to 20*s.* ditto; ordinary farm labourers, 12*s.* to 14*s.*

"All the above servants are fed and lodged by their employers. Where rations are given, the following is the scale per week allowed in Victoria: 10 lb. to 12 lb. meat (beef or mutton), 10 lb. flour, 2 lb. sugar, and $\frac{1}{2}$ lb. tea.

"The following wages for skilled labourers and other tradesmen are without rations, unless where specially mentioned:—

"*Tradesmen.*—Among stonemasons, bricklayers, plasterers, and carpenters, an arrangement has been made with the employers that the rate of wages shall be 10s. per day; builders' labourers (hodmen), 7s. per day; pick and shovel men, 6s. per day.

"*Tailors.*—In first class establishments good men are scarce, and constant work is to be had at the average of from 3*l.* to 3*l.* 15s. per week. In second class establishments the average earnings are from 2*l.* 10s. to 3*l.* In factories, tailors, best hands, average 2*l.* 10s. Tailoresses can earn as follow:—Trousers and vest hands, 30s. per week; coat ditto, 35s.; pressers, 2*l.*

"*Clothing Machinists.*—Best, 30s. per week; ordinary, 20s.; shirtmakers (machinists), girls, 12s. 6d. to 17s.; cutters, 15s. 6d. to 30s.; finishing, 2s. to 6s. per dozen.

"*Bootmakers.*—In the best establishments, for bespoke work, the rates paid are as follow:—Wellingtons, 14s. 6d.; elastics, 12s.; closing, 8s.; riding boots, back strap, 24s. In factories, good workmen can earn from 2*l.* to 2*l.* 15s. per week at slop work. Ordinary hands earn 2*l.* per week.

"*Cabinet Makers.*—In the best shops the average earnings for good tradesmen are 9s. per day; first class hands in upholsterers' earn from 3*l.* to 4*l.* per week. In second class establishments and factories the best hands earn 10s. per day; upholsterers, 9s. to 10s.; polishers, 8s. to 9s.; sawmill hands, 10s. per day of eight hours. Work in this trade is rather dull at present.

"*Ironfounders, Smiths, &c.*—Smiths are paid per hour, and good men can earn on an average 10s. to 14s. per day; fitters, 9s. to 12s.; turners, 14s.; moulders, 11s. to 14s.; pattern makers, 10s. to 13s.; mechanical engineers, 12s. to 14s. Shoeing smiths earn on an average 2*l.* 10s. per week of ten hours per day.

"*Stevedores' Men.*—Lumpers and woolstowers are paid 12s. per day; foremen, 16s. The rate never alters, but there is often a great deal of broken time. Donkey-engine drivers about 4*l.* per week; engineers in tow-boats, 16*l.* per month.

"*Painters.*—Ordinary hands get 8s. per day, but work is not very steady in this trade.

"*Watchjobbers.*—There is a fair demand for steady workmen at 4*l.* per week. Jewellers, enamellers, and single engravers would find ready employment at remunerative wages.

"*Coopers.*—Most of the work in this trade is done by the piece; the wages fixed by the trade are 10s. per day of ten hours.

"*Carriage Builders.*—Good workmen are scarce in all branches of this trade, and can get constant employment at from 3*l.* to 4*l.* per week.

"Grooms in livery stables get from 30s. to 40s. per week.

"*Saddlers and Harness Makers.*—The best hands in this trade earn 3*l.* per week—time, ten hours per day; second class (mostly young men), 25s. to 30s.

"*Bakers.*—First class workmen (foremen) average 3*l.* per week; second hands, 2*l.* to 2*l.* 5s. The work in this trade is ten hours per day.

"*Gardeners.*—First class men, without rations, for situations near town, get 50s. to 60s. per week; but the demand for best hands is very limited; ditto, for country, 50s.; second class ditto, near town, 36s. to 42s. per week; third class, for country, with rations, 15s. to 20s.

"*Butchers.*—Shopmen receive from 35s. to 40s. per week; boys, 20s. to 25s. per week each, with board and lodging. The hours in this trade are long.

"*Plumbers and Gasfitters.*—Good tradesmen find ready employment in this trade, and earn 3*l.* per week of eight hours per day.

"*Miners.*—The average rate for miners in the Ballarat district is 2*l.* 5s. per week, eight hours' shift; breaksmen get a slightly higher rate of wages. In Bendigo district, quartzminers in deep sinking, for pit work, get 2*l.* 10s.; ordinary quartzminers, 2*l.* 5s. and 2*l.*, according to the character of the work; engineers get

from 3*l.* 10*s.* to 3*l.*; ordinary labourers, 5*s.* to 6*s.* 6*d.* per day. In Bendigo a great deal of the mining is done on tribute. The rates for Bendigo and Ballarat are generally accepted throughout the country as the criterion for quartz and alluvial miners' wages."

V.—Shipping Casualties, 1857-69.

MR. HENRY JEULA has kindly supplied these comprehensive statistics of maritime accidents reported in *Lloyd's List*:—

The following figures are gleaned from different *Analyses of Wrecks and Casualties*, prepared by the Statistical Committee of *Lloyd's*, the fourth issue of which has just been published:—

Average Number of Losses Posted on Lloyd's Loss Book for Four Periods of Ten Years each.

	Ten Years ending (inclusive)			
	1866.	1867.	1868.	1869.
January	409·7	415·6	426·1	409·7
February	297·6	291·4	290·7	291·8
March	300·9	299·4	289·1	289·9
April	226·6	222·6	215·8	201·1
May	186·6	188·4	183·6	184·3
June	168·8	166·2	163·8	159·8
July	163·8	165·4	154·6	152·2
August	189·0	178·9	183·6	177·0
September	230·7	222·7	224·8	229·4
October	383·1	378·5	371·8	354·8
November	462·2	479·9	468·9	451·2
December	424·1	448·6	447·8	442·2
	3443·1	3457·6	3420·6	3343·4
First quarter	1008·2	1006·4	1005·9	991·4
Second „	582·	577·2	563·2	545·2
First half-year	1590·2	1583·6	1569·1	1536·6
Third quarter	583·5	567·	563·	558·6
Fourth „	1269·4	1307·	1288·5	1248·2
Second half-year	1852·9	1874·	1851·5	1806·8
Annual total	3443·1	3457·6	3420·6	3343·4

Showing a gradual reduction of 2·90 per cent. upon the first ten years' average.

The effect of greater rapidity in receipt of information appears in the increase of numbers in December, the almost stationary figures of January and February, and the gradual reduction in succeeding months until September, when the numbers are again nearly identical.

Strandings reported in—

	Number of Strandings.	Percentage on whole Casualties.
1866.....	3,381	28·87
'67.....	3,442	27·51
'68.....	3,094	29·35
'69.....	3,163	27·25
Average for three years, ending 1868 inclusive }	3,286	28·52

Showing a reduction in 1869 of 3·74 per cent.

The *Collisions* in 1869, on the contrary, show a considerable increase, the numbers being—

	Number of Collisions.	Percentage on whole Casualties.
1866.....	1,958	16·72
'67.....	2,062	16·48
'68.....	1,923	18·6
'69.....	2,185	18·82
Average for three years, ending 1868 inclusive }	1,981	17·20

Giving an increase in 1869 over the average of 10·30 per cent.

The *Missing Ships* were as under :—

	Number of Missing Ships.	Percentage on whole Casualties.
1866.....	98	·84
'67.....	100	·8
'68.....	91	·88
'69.....	101	·87
Average for three years, ending 1868 inclusive }	96	·84

Showing an increase in 1869 of 5·21 per cent.

The vessels *Abandoned* numbered in—

	Number of Vessels Abandoned.	Percentage on whole Casualties.
1866.....	341	2'91
'67.....	436	3'48
'68.....	309	2'99
'69.....	293	2'52
Average for three years, ending 1868 inclusive }	362	3'14

Showing a reduction upon the average in 1869 equal to 19'06 per cent.

VI.—*Gymnastics in the British Army.*

FROM the *Globe*:—

“ It is gratifying to learn, as we do from a report lately laid before Parliament, that under the influence of gymnastics the British army is increasing in activity, weight, girth of chest, and size of arm. To these facts commanding officers, doctors, and statistics alike bear testimony. Indeed, so great is the recorded increase of weight and size in many instances, that they would be scarcely credible, unless on the supposition that the individuals were young recruits whose natural growth has had something to do with their vastly increased proportions. At Aldershot, classes of men from every regiment have been continuously under instruction, and the results have been deemed very satisfactory. At the end of the course sixteen men of the 34th Foot showed the following remarkable average increase, viz., $1\frac{1}{4}$ lb. in weight, $3\frac{1}{4}$ in. in girth of chest, $\frac{3}{4}$ in. in the forearm, and $1\frac{1}{2}$ in. in the upper arm. At Colchester the increase was even more remarkable; there, in one class, the average increase in weight during the course of three months was 13 lb.; while at Canterbury, one young giant, Cornet Lysaght, gained 16 lb. in weight, 3 in. round the chest, 1 in. round the forearm, and 2 in. round the upper arm. As may be expected, the increase at the Military College was even larger than in the army; one cadet increased more than 5 in. in girth of chest, and another gained 21 lb. in weight; these enlargements are, however, to be attributed to natural as well as gymnastic results. In India the same system has been tried, and with success; but then there seems to have been doubts as to the advisability of practising the running drill, and we are not surprised at it; twenty commanding officers declared in its favour, and twenty-four against it. At Aden the medical officer reported that the climate being extremely depressing, the running drill was found to cause great exhaustion, and was, therefore, discontinued. We can only wonder at the folly of any commanding officer for a moment sanctioning such violent exercise in such a place as Aden.”

VII.—Trade and Navigation of British India.

FROM the *Times of India*, 18th July:—

"The returns of the 'trade and navigation of British India,' issued monthly by the Statistical Section of the Financial Department, have now attained that stage when they include, besides the monthly returns, parallel statements for the latest twelve months, and for the corresponding periods of the preceding year. The latest of these trade returns is brought up to the end of March. It thus synchronises with the financial year both in India and England. It has generally been the tables of declared values that have been referred to as a test of the actual state of trade. When once these values are assessed on correct principles—as we believe they have been during recent years—it is not only more convenient, but more scientifically correct to use the totals of values rather than those of quantities in comparing the progress or fluctuations of international commerce. But this March return, in an obliging footnote, reminds us of a circumstance affecting the comparison by valuation of the last two years' trade, which we, in common with other writers on this subject, have overlooked, when noticing the decline in import trade during last year, mainly spread over the four months April to July. It is this. In the middle of March last year there came into operation the readjusted scale of declared values, often petitioned for by our own and other chambers of commerce, and which rated cotton goods and the principal metals, as Mr. Harrison tells us, on an average 15 per cent. less than for previous years. Therefore an adjustment to that extent in the value of these imports must be made in comparing 1868-69 with 1869-70. But we should first extract the totals of Indian foreign commerce as they stand for the two years in this return. And this opportunity may be taken of remarking that the simple and complete table we have now to be at the trouble of constructing, ought to be found ready made by our official statisticians on one or other of the two pages from which we take it:—

Foreign Trade of British India.

		Twelve Months ending 31st March.	
		1868-69.	1869-70.
		Ra.	Ra.
<i>Imports—</i>			
Merchandise	35,99,01,417	32,92,75,198	
Treasure	15,15,59,544	13,95,48,072	
Total of import trade	51,14,60,961	46,88,23,270	
<i>Exports—</i>			
Merchandise	51,67,62,321	50,67,95,443	
Treasure	1,39,55,797	1,04,23,528	
	53,07,18,118	51,72,18,971	
Grand total of British Indian } foreign trade	£104,217,907	£98,604,224	

Note.—We have not included in the above the re-exports of foreign merchandise—amounting in 1868-69 to 1,385,932*l.*, and in 1869-70 to 1,791,831*l.* It is open to argument whether these ought to be excluded; but it appears to us that to include them would be to count twice over. As to the coasting trade, large though it be—over 25,000,000*l.* in 1869-70—there can be no plea whatever for including it with foreign commerce.

" And now for the required adjustment already referred to above. It will be seen from our table of total values, that the whole foreign trade of 1869-70 exhibits a declension of 5,583,681*l.* as compared with that of the previous year. We are not going to attempt to explain that 5½ millions away; but it is not only possible, it is quite needful for the sake of correctness, to show that more than half that decline is not real and only apparent. The tariff values affixed to the two principal articles of our import trade, and which form bases of certain columns in these tables, were maintained, as we have seen, at their unduly high rate past the end of 1868-69. It is necessary, therefore, to deduct that 15 per cent. from the two items of cotton goods and metals imported in that year. The total value of each of these commodities in the two years is given as follows, and we apply the necessary deduction :—

Imported into British India in

	1868-69.	1869-70.
	Rs.	Rs.
Cotton manufactures	18,85,81,125	16,27,12,163
Metals	3,81,35,402	3,52,64,883
	22,67,16,527	19,79,77,046
Deduct 15 per cent.	3,40,07,475	—
	19,27,09,052	—
Real increase in 1869-70 in these two } items	—	52,67,094
Apparent decline in total foreign trade } of British India in 1869-70	—	£5,583,681
Deduct as above.....	—	3,400,747
Real decline only	—	£2,182,934

" As the cotton manufactures are necessarily classed under the various heads of 'yards,' 'pieces,' 'pairs,' and 'pounds,' it is not convenient here to state the total quantities for purposes of comparison with values, but we may give the two principal items :—

	1868-69.	1869-70.
<i>Piece Goods—</i>	Yards.	Yards.
Grey	67,78,92,404	65,50,39,227
White	15,13,87,759	14,30,30,271

" As to metals, they are scattered under many different heads, and in those monthly returns are not rendered under totals as in the yearly statistics; so we can do nothing here by way of offering figures for a comparison between the quantities and values of them in the two years.

" Having done what we could to set the trade figures of 1869-70 in their true light, we may turn aside to see if these dry tables may be made to throw any light on the exciting topic of the day—war between two of our European customers. Doubtless the conflict now declared will cause a very real decline in the Indian trade of this year, even should it rage but for a few weeks. Let England remain as passive as she may, our direct trade with home will be seriously affected, and in

countless indirect ways the 'war time' will exercise an adverse influence on Indian commerce. Our trade with France and North Germany will not entirely cease, but it will be very materially lessened. The direct trade between India and Germany (not entered separately in the monthly statement) is very small, showing a total under ten lakhs in 1868. Our direct commerce with France is considerable enough to make it worth while to give a few particulars which may serve to explain how far this section of our commercial returns is likely to be affected by the lawless outbreak of the French Emperor. If we have correctly taken out, from the many pages over which they are scattered, all the items of trade with France, our total direct commerce with that country is thus represented:—

Trade between British India and France, 1869-70.

<i>Imports from France—</i>		Ra.
Goods	42,65,960	
Treasure	37,61,325	
	<u>80,27,285</u>	
<i>Exports to France—</i>		
Merchandise	3,93,62,509	
Total trade with France.....	<u>4,73,89,794</u>	

"The tonnage of French vessels during the past year in and out of our ports was 52,606 entered, and 84,351 cleared; but the tonnage of vessels 'with cargoes' from and to France stands at 25,890 and 1,17,203 respectively. We observe that our import of treasure from France in the previous year was close on 96 lakhs. In the period between 1861 and 1868 the value of our trade with France appears to stand thus:—

		£
Exports to France	15,716,965	
Imports from „	<u>12,786,441</u>	
Total of seven years	<u>28,503,406</u>	

"We presume that treasure is excluded from this account; but no indication is given on that point. From 1863 to 1867 the French steamers from Marseilles brought for India a total of treasure 21,050,400*l.*; but this would be largely on English account. The discrepancy between our exports to, and imports from, France, serves as one illustration of the special commercial disadvantage under which India labours in order to provide the annual 'tribute' required for her imperial suzerain. But we can ill afford to see a foreign trade of five millions sterling interfered with as our French commerce will be by this mad freak of the French ruler. No doubt a larger part of our trade with both France and North Germany will now be carried on in 'British bottoms' and by other neutral vessels. There will, in consequence, perhaps be a slight improvement in freight rates for British vessels; but this will be very small compensation for the general depression that a continental war must induce. Many other facts brought out by these tables are worthy of special notice, but enough for the present."

VIII.—*Colony of South Australia, 1860-69.*

ABSTRACTED from the *Australian Mail* of the 12th July :—

"The *Statistical Tables* showing the trade and commerce, the land sales, immigration, and financial position of the colony of *South Australia* during the year 1869, give the following particulars :—

"The following table, shows the value of the *imports* and *exports* in the following years :—

	Population.	Imports.	Staple Exports.
	No.	£	£
1860	121,960	1,639,592	1,576,326
'65	156,605	2,927,596	2,754,657
'68	176,298	2,238,510	2,603,826
'69	181,150	2,754,770	2,722,438

"It must be stated that about 10 per cent. of the exports were re-exported, so that in order to know the exact quantity retained for consumption in the colony itself the whole of the imports as given above must be reduced by about a tenth.

"The following statement of the *total imports* of 1869, distinguishing those from Great Britain, British possessions, and Foreign States, is interesting at the present time, when we hear so much of the competition and even of the mastery which is being obtained by foreign manufactures over our own in the colonial markets. For the above years the totals, as far as South Australia is concerned, are :—

	Great Britain.	British Possessions.	Foreign States.
	£	£	£
1860	939,345	654,319	55,028
'65	1,741,691	1,034,334	151,571
'68	1,411,509	696,501	130,500
'69	1,630,761	951,683	172,026

"From this table we deduce the following facts :—1. During the ten years over which it extends, the imports reached their maximum in 1865. 2. The imports of 1869 exceeded those of 1868 by 516,260*l.* 3. The imports of 1869 exceeded the average of those of the previous nine years by 489,757*l.* 4. The total imports of the last ten years from Great Britain were 58 per cent., those from British possessions 37 per cent., and those from Foreign States 5 per cent. upon the grand total, which amounted to 23,139,889*l.* It must, however, be conceded that the *foreign imports*, although their comparative value is still trifling, are increasing in greater ratio than those from Great Britain, for in 1869 it appears that the total imports from Great Britain were 60 per cent.; from British possessions, 34 per cent.; and from Foreign States, 6 per cent. upon the whole. Of the total imports from Foreign States, the *tea* and *sugar* alone exceeded in value 100,000*l.*, and the *timber* 45,695*l.*, leaving only 24,443*l.* as the value of all other goods imported from foreign parts. It appears, therefore, that there are no grounds for supposing that the market is swamped with the products of 'American prison labour,' or with any other foreign manufactures.

"The following is a comparative statement of the exports of staple produce in 1868 and 1869:—

	1868.	1869.
	£	£
Agricultural	570,259	895,286
Horticultural	11,785	16,591
Dairy	8,928	9,758
Animal	1,357,325	1,098,858
Minerals	619,604	643,345
Manufactures	16,042	31,291
Natural	17,847	23,340
Unenumerated	1,336	3,970
	2,603,826	2,722,439

"Another table is also very interesting as indicating the progress of settlement. A few years ago Port Adelaide was, if not the only port, the one from which nine-tenths of the exports were shipped. Now there are no less than fourteen other shipping ports, viz., Wakefield, Augusta, Robe, Willunga, Yankilla, Macdonnell, Goolwa, Wallaroo, Mannum, Blanchetown, Victor, Milang, Caroline, and Swanport.

"The first exports of staple products which commenced in 1838 and those of the two following years, consisted exclusively of wool, whalebone, and oil. In 1841, lead, timber, and slates were added, and in 1842 butter and cheese. In 1843, flour, wheat, barley, oats, vegetables, salted beef, salt, hides, barilla, and copper were included in the exports. After that the exports became general. The following table will show the gradual progress of the colony at periods of five years:—

	Population.	Staple Exports.	Savings Bank Deposits.
	No.	£	£
1838	6,000	5,040	—
'43	17,366	66,160	—
'48	38,666	465,878	5,313
'53	76,050	731,595	54,355
'58	118,340	1,355,041	63,880
'63	140,416	2,095,356	189,143
'68	176,298	2,603,826	312,728
'69	181,150	2,722,438	382,284

"The interest attached to the sales of *Crown lands* seems to increase yearly, principally on account of the competition of the several colonies to induce the settlement of the country in each, and specially to encourage agriculture. The sales in 1869, on and after 11th February, were made in accordance with the Act of 1868-69, which authorises the purchaser to claim four years' credit for the payment of the amount, upon his paying also an additional 20 per cent. upon the purchase money at the commencement of the term. An amendment of the Act has been passed by the Parliament extending the period to five years, and in other

respects giving the purchaser more liberal terms, but it has not yet been assented to, and consequently has not been brought into operation. The following tables, compiled from official sources, show the *land sales* in 1869, distinguishing those sold by public auction and private contract:—

	Acres.	Amounts.
	No.	£
Public auction	134,593	172,628
Private contract.....	52,413	54,496
Deferred payments	10,376	10,876
Agricultural areas	23,663	49,012
Totals	221,245	286,506

"It should be understood that the latter amount does not represent the actual sum paid into the treasury. The Act of 1868-69, as stated, provides that the purchaser under the credit clauses should pay 20 per cent. on the purchase money, which is regarded as interest upon the amount; consequently the actual payments in 1869 were only 245,739*l*.

"By 'private contract' is meant lands purchased at 1*l*. per acre after they have passed the hammer. Of such lands there were open for selection at the end of the year over 470,000 acres.

"The average of the yearly sales by auction and private contract during the seventeen years, from 1852 to 1868, was 180,128 acres, and the average yearly amount realised 235,316*l*. 15*s*. The greatest quantity of land sold in any one year since the first sales by auction was that of 1865, when 316,477 acres were alienated, for which the sum of 510,268*l*. was received. The total quantity of land alienated to the end of 1869 was 3,991,165 acres, exclusive of that disposed of under the provisions of the Scrub Lands Act, the returns of which are not published in the *Gazette*. The area of the colony, exclusive of the northern territory, is estimated at 245,128,374 acres. Hence it appears that the actual sales have scarcely yet reached a sixtieth part of the whole area."

IX.—Prussian Agriculture.

FROM an article in the *North British Review* on the "Agriculture and Agrarian Laws of Prussia:—

"If Prussia has been behindhand in the collection of agricultural statistics, yet the fact is known that in 1870 the land supported twice as many inhabitants as in 1816, though a greater space was at the same time devoted to the feeding of cattle and the production of plants for manufactures; and this is sufficient to prove the advance that has been made, when it is added that the excess of production over consumption has not decreased, that is to say, that Prussia, in ordinary times, exports corn. And nevertheless the country is not reckoned among the most fertile, and the seasons in the north are by no means very mild. The following figures relative to the actual production are taken from the latest official documents:—The extent of arable land is reckoned at a little more than half the territory (50·7 per cent.). This land is cultivated as follows:—Of 100 morgen, 10 are in wheat, 24 in rye, 8 in barley, 16 in oats, 3 in peas and beans, 2 in buckwheat, 3 in rape and poppy, 12 in potatoes, 22 in turnips, in trefoil, and in fallow. Now the

average yield of 10 morgen of wheat is reckoned at 87·6 scheffels (the scheffel = 55 litres, and the bushel = 37 litres), which makes almost 8 bushels an acre. This shows that the soil, and still more the climate, is not well suited for wheat. But does it suit other cereals better? The mass of the people eat rye bread; and it appears that 24 morgen of rye produce an average of nearly 189 scheffels. That would be from $6\frac{1}{2}$ to 7 bushels an acre—a figure which is probably below the truth. It is incident to statistics of production to give figures which are below the mark; the producer understates for fear of the tax. It is only with regard to the cattle that we have information which can be considered exact. The following are the numbers for the years 1816, 1858, and 1867:—

	1816.	1858.	1867.
Horses.....	1,243,261	1,622,400	1,878,167
Prussia as enlarged	—	—	2,313,817
Horned cattle.....	4,013,912	5,527,402	5,997,964
Prussia as enlarged	—	—	7,996,818
Sheep	8,260,396	15,374,717	18,820,780
Prussia as enlarged	—	—	22,262,087
Swine	1,494,369	2,589,371	3,802,143
Prussia as enlarged	—	—	4,875,114

“The breeding and scientific feeding of cattle have much occupied the German agriculturists and (as they are now called) zootechnicians. Some remarkable experiments have been made, but of a kind and method quite different from that of Bakewell and his rivals. The English have endeavoured to improve breeds, to produce good types, and have succeeded in almost transforming the bodies of animals, and making them more useful to man. They have striven for a tangible result and have obtained it. The Germans have concerned themselves on the other hand with the why and the how; they have endeavoured to follow each particle of nourishment through the intestines, the blood, and the muscles of the animals; they have investigated thoroughly, but always without taking into account the vital principle, the relative value of the different fodders. And if they have thus obtained less palpable results than the English, they have contributed none the less to the progress of science. In fact, however, scarcely anything is yet definitively acquired in this direction. Only a corner of the veil of physiology has yet been raised; and to-morrow will perhaps in more than one case reveal the error of to-day. But these researches have at least the effect of popularising the methods of rigorous observation, and introducing system into experiments.

“The scientific spirit of Germany has found yet another sphere and another application in the ‘industrial accessories’ of agriculture. It might seem stretching this term too far to include under it tilefields, brickfields, and some other industries belonging by their nature to the country, and generally in the hands of the cultivators. We also exclude corn mills, oil mills, breweries, starch factories, &c. The breweries were for a long time properly reckoned amongst these accessories, but are not so any longer, unless in rare exceptional cases; the exigencies of modern production have necessitated their general establishment on a large scale, and so emancipated them from agriculture. The two industrial accessories about which a word must be said, are distillation and the manufacture of beetroot sugar. For a considerable time cereals and, still more, potatoes have been used for distillation in Prussia, the refuse of this process being employed for fattening cattle. Distilling is a delicate operation; and the materials employed in Prussia, especially the potato, present peculiar difficulties. And as the apparatus is, for the most part, found on large properties, the possessors of which are generally educated and have money at

their disposal, it is not wonderful that science has been often consulted, that its indications have been followed, and that notable progress has been made. But this scientific progress itself, by requiring an apparatus more and more costly, and at the same time larger and larger (for costly machinery is not profitable except when production is on a large scale), has contributed considerably to diminish the number of distilleries, while it has increased the amount of production. The manufacture of beetroot sugar has taken an extension which it would have been difficult to foresee. In 1836 only about half a million quintals of beetroot were used, and at the present date (1870) the amount is about fifty millions. Thus, in thirty-four years the production has increased a hundredfold; or rather, as less than 5 per cent. of sugar was extracted from the beetroot in 1836, and nearly 7 per cent. is extracted now, the production has risen from 1,089,900 kilogrammes to at least 210,000,000 of kilogrammes. It is not necessary to say what part science has taken in this progress; but in fairness it should be mentioned that the French and Belgian chemists have contributed to it in a very large degree.

"It would be useful now to test the advance of prosperity amongst the agricultural population. But here again the want of statistics makes itself felt, and we have only indications to judge from. It has already been said that the population has doubled in fifty years, being supported, nevertheless, by the same territory. It may now be added that at the commencement of the period in question, seven-eighths of the population belonged to the agricultural class, whilst now more than half the population is connected with other industries. The Prussian census of 1867 showed that the country, including the new provinces, contained 23,970,941 inhabitants, of whom 11,527,440 were occupied in agriculture. Of these 11,527,440, the actual workers were 4,105,362; the remaining 7,422,078 were the members of their families. The census of 1861, applicable to Prussia as it then stood, gives, on a total population of 18,491,220 inhabitants, 753,579 proprietor cultivators employed exclusively in agriculture, 30,194 farmers under the same condition, 357,039 proprietor cultivators concerned with agriculture as an industrial accessory, 30,455 farmers under the same condition. Adding the members of the families, this reaches a total of 4,922,050 persons. The number of agricultural auxiliaries amounted to 3,412,672 persons, viz., 32,647 managers and overlookers, 13,734 female inspectors or head managers, 556,773 farm servants, herdsmen, and shepherds, 498,869 female servants, 574,332 day labourers, 565,064 female day labourers. Adding 1,089,112 members of their families, this makes 4,501,784 persons. And, with the 4,922,050 masters and their families, the total thus becomes 9,423,834 persons. One-half of the population therefore produced the food for the whole. It must be supposed of the large number of proprietors who cultivate for themselves, not indeed, that they are all rich, but at least that they possess a certain competence; and that the more, since their land produces sufficient to support not only themselves, but also other persons as numerous as themselves. The sale of their surplus produce must procure for them either an enhancement of their comfort or an addition to their capital. These, indeed, are only conjectures; but they are based in their turn on facts, such as the growing increase of wages, the more and more frequent employment of machinery and improved instruments, the rise in the price of agricultural produce, and the increasing consumption of luxuries, such as coffee and sugar. And the evidence they rest on is sufficiently strong to enable us to accept them as true. It would, indeed, be melancholy, if freedom, the recent discoveries of physical science, and juster economic views, had not produced their ordinary effect, and resulted in that progress of which they are the most powerful agents."

X.—*The Food Consumption of Paris.*

ABSTRACTED from the *Economist* of 17th September:—

"The novelty of the siege of a city like Paris naturally gives an unusual interest to the question of the supplies of its inhabitants; and there are one or two

aspects of that question to which we wish to draw attention. * * * * *
 Fortunately there is no lack of authentic facts, which are good as far as they go. In consequence of the *octroi* an authentic record is kept of the consumption of almost every article except flour. The statistics are not chance figures, like some of our Board of Trade figures, collected by people who have little interest in them from others who have still less, and subject to no sort of verification. They are the statistics of the collection of a tax where those who pay and those who receive the duty have an interest in not being cheated, so that there can be no practical error in the result. A short pamphlet which comes before us at the present moment, written by M. Clement Juglar, one of the ablest French economists,* is a careful study of the history of the consumption of Paris during the last thirty years; and it is some of the facts there detailed and reasoned out which we wish to bring before our readers.

"The information collected does not apply to flour, but it includes meat, alcoholic liquors, salt, and certain articles of so-called 'luxury,' such as fish, eggs, poultry, butter—in short, a very large number of what are practically articles of first necessity. It also shows the annual amount per head of the duties paid, and as the rates we understand vary little, we thus get an additional indication of the increase or diminution of the consumption in a series of years. M. Juglar enables us to repeat a considerable part of this information in a condensed form. He states the variation in the annual consumption and duties paid at certain dates, between 1840 and 1867, and we may take the two extreme dates to show what the present consumption is, and the wonderful improvement indicated in the social condition of the Parisians during the last thirty years. The comparison is :—

Duties Paid (per Head).

	1840.	1867.
	£ s. d.	£ s. d.
All duties together	1 6 9½	2 3 5
Duty on wine	— 8 10½	— 17 7
„ meat	— 3 7	— 5 8
„ eatables (including meat)	— 4 11	— 7 7

Quantities Consumed (per Head).

	1840.	1870.
	Gals. pints.	Gals. pints.
<i>Alcoholic Liquors—</i>		
Wines in wood	18 2	40 2
„ bottle	— 1½	— 2½
Spirits	1 —¼	1 3¼
Beer	2 6½	4 1½
<i>Butcher Meat—</i>	lbs.	lbs.
From the slaughter-houses and imported	111½	150½
Meat sold by auction	11½	21½
Pork	22	22½
Salt	11	15½

* Les Consommations de Paris et l'Octroi. Par Clément Juglar. Extrait du *Journal des Economistes*. Numéro de Mars, 1870. Paris: Guillaumin et Cie., Editeurs.

Value of Goods Sold (per Head).

	1840.	1870.
	s. d.	s. d.
Eggs	4 8	7 9
Butter	10 2	13 6
Saltwater fish	4 5	7 4
Freshwater fish	— 6	— 10½
Poultry	6 8	13 6
Oysters	1 1	— 10½

"A table like this speaks for itself as to the quantities which Paris can consume. The population is one which has been steadily growing in comfort during the last thirty years, till now there is a mass of people accustomed to large supplies of food of good quality. The average of the various descriptions of meat alone is 4 lbs. per head a-week, and the fact that this average necessarily includes many who get little or none, only proves the greater dependence on their meat supplies of the still remaining multitudes, whose large consumption swells the average. The consumption of wine, again, is nearly a gallon per head per week, not to speak of the consumption of spirits and beer. One has only to look at such figures to see that, although the difficulty may be surmounted, it will be no easy task to distribute supplies in Paris during a siege. Not only will the great pauper population come to the surface very soon demanding to be fed, but the mere difficulty with great numbers of respectable men and women deprived of employment and resources, and who have been accustomed to good living, will be enormous. Either the bourgeoisie and all the richer classes must share equally with the families of the poor, or the families of the very men who are defending Paris will starve; and in either case there is danger to the unity of resistance. Considering the additional and enormous danger from the mob, no prospect could well be more gloomy.

"In reviewing the history of the last thirty years, M. Juglar notices, as one of the most remarkable facts, the effect upon Paris of the political convulsion of 1848. In almost every other period there has been a uniform increase in the consumption of articles of first necessity, and usually even of 'luxury,' but the convulsion of 1848 must have involved an incredible amount of private suffering. In that year the consumption of the various articles above enumerated fell off as follows:—

	Per Head per Cent.
Butcher meat	45
Pork	40
Wines in wood	16
Spirits	95
Wines in bottle	44
Saltwater fish	25
Oysters	24
Beer	20
Eggs	19
Butter	13
Poultry	6

Which shows, according to M. Juglar, that while there was general suffering it was the mass of the poorest who were most affected. Works were at a standstill, and the consumption of meat and pork, as well as of wines in wood, which include the common wine of the poor, fell off enormously. The conclusion we draw from this fact is that the characteristic suffering of 1848 must already have begun in Paris. The period of defeat has now lasted for six weeks, and during all that time,

even if the war itself had not produced a material disturbance of industry, there has been a rapidly extending suspension of business. Revolution, as in 1848, has followed a huge calamity, such as had not then occurred, and which by itself has produced much greater loss and ruin. It is another aggravation of the evil that months ago the building trades of Paris entered upon a 'bad time,' through the financial collapse of the municipality and the suspension of the dependent schemes of private speculators which were largely carried on by borrowed money. M. Juglar calculates that much of the great increase in the consumption of Paris is due to the artificial expenditure on workmen's wages. All this had partly come to an end before the war broke out, and must now be wholly suspended with every species of industry. If everything had been done with the express purpose of making Paris enter on the defence under the condition of accumulated misery among its masses, its unfitness to make a start could hardly be increased. The chronic state of affairs was bad before the war broke out, and the delay which has elapsed between the first defeats and the siege, though it has given time for purely military preparation, has also given time for the impoverishment of the people to begin. The actual siege, until Paris is bombarded, can have few worse terrors for thousands than the mere continuance of the utter lack of employment which has existed for weeks." * *

XI.—Out-door Relief in Money and in Kind.

It appears from a recently published return of the Poor Law Board, that of the 649 unions of England and Wales, 110 administered during the half year ended Lady-day, 1870, the whole of the relief to the out-door paupers in money; the other unions gave the relief partly in kind but more largely in money. On the aggregate, as the subjoined table shows, about *one-sixth* was given in kind, and *five-sixths* in money:—

Divisions.	Number of Unions.	Relief to Out-door Paupers, Half Year ended Lady-day, 1870.		
		In Money.	In Kind.	Total.
		£	£	£
The Metropolis	31	147,739	67,188	214,927
South-Eastern	98	144,025	57,902	201,927
„ Midland	64	135,116	41,320	176,436
Eastern	56	102,155	50,166	152,321
South-Western	79	188,887	30,384	219,271
West Midland	82	146,123	31,314	177,437
North „	45	104,103	15,260	119,363
„ Western	41	144,914	21,019	165,933
York	61	125,792	7,022	132,814
Northern	39	91,107	2,613	93,720
Welsh	53	170,111	8,640	178,751
England and Wales.....	649	1,500,072	332,828	1,832,900

REGISTRATION OF THE UNITED KINGDOM.

No. I.—ENGLAND AND WALES.

MARRIAGES—QUARTER ENDED MARCH, 1870.

BIRTHS AND DEATHS—QUARTER ENDED JUNE, 1870.

A.—*Serial Table of MARRIAGES, BIRTHS, and DEATHS, returned in the Years 1870-64, and in the QUARTERS of those Years.*

Calendar YEARS, 1870-64:—Numbers.

Years.....	'70.	'69.	'68.	'67.	'66.	'65.	'64.
Marriages No.	—	176,629	176,962	179,154	187,776	185,474	180,387
Births..... „	—	772,877	786,858	768,349	753,870	748,069	740,275
Deaths „	—	495,086	480,622	471,073	500,689	490,909	495,531

QUARTERS of each Calendar Year, 1870-64.

(I.) MARRIAGES:—Numbers.

<i>Qrs. ended last day of</i>	'70.	'69.	'68.	'67.	'66.	'65.	'64.
March..... No.	36,506	37,713	36,696	36,441	37,579	36,807	37,988
June „	—	43,071	45,364	45,589	48,577	45,827	44,599
September „	—	43,831	43,509	44,086	46,257	45,852	44,675
December „	—	52,014	51,893	53,088	55,363	56,988	53,125

(II.) BIRTHS:—Numbers.

<i>Qrs. ended last day of</i>	'70.	'69.	'68.	'67.	'66.	'65.	'64.
March..... No.	206,441	204,055	198,584	194,763	196,753	194,130	192,947
June „	203,484	188,459	202,839	199,660	192,437	192,988	188,835
September „	—	190,132	192,583	190,782	179,086	181,941	181,015
December „	—	190,231	192,852	183,144	185,594	179,010	177,478

(III.) DEATHS:—Numbers.

<i>Qrs. ended last day of</i>	'70.	'69.	'68.	'67.	'66.	'65.	'64.
March..... No.	143,991	133,437	119,676	134,008	138,136	140,410	142,977
June „	121,246	118,849	110,010	112,355	128,551	115,892	116,880
September „	—	114,654	130,482	108,513	116,650	113,362	112,223
December „	—	128,146	120,454	116,197	117,352	121,245	123,451

*Annual Rates of MARRIAGES, BIRTHS, and DEATHS, per 1,000 PERSONS
LIVING in the Years 1870-64, and the QUARTERS of those Years.*

Calendar YEARS, 1870-64:—General Ratios.

YEARS.....	'70.	Mean '60-69.	'69.	'68.	'67.	'66.	'65.	'64.
Estmtd. Popln. of England in thousands in middle of each Year,...	22,090	—	21,870	21,649	21,430	21,210	20,991	20,772
Persons Mar- ried	—	16·84	16·16	16·34	16·72	17·70	17·68	17·36
Births	—	35·38	35·84	36·35	35·85	35·54	35·64	35·64
Deaths.....	—	22·51	22·64	22·20	21·98	23·61	23·39	23·86

QUARTERS of each Calendar Year, 1870-64.

(I.) PERSONS MARRIED :—Ratio per 1,000.

Qrs. ended last day of	'70.	Mean '60-69.	'69.	'68.	'67.	'66.	'65.	'64.
March	13·46	14·03	14·04	13·64	13·84	14·42	14·28	14·72
June.....	—	17·08	15·82	16·84	17·08	18·40	17·54	17·24
September	—	16·36	15·88	15·92	16·30	17·28	17·32	17·04
December	—	19·75	18·80	18·76	19·56	20·64	21·46	20·22

(II.) BIRTHS:—Ratio per 1,000.

Qrs. ended last day of	'70.	Mean '60-69.	'69.	'68.	'67.	'66.	'65.	'64.
March	38·05	37·02	37·98	36·98	37·00	37·77	37·65	37·40
June.....	37·00	36·52	34·61	37·63	37·42	36·44	36·92	36·51
September	—	34·09	34·45	35·25	35·28	33·46	34·34	34·53
December	—	33·82	34·38	35·21	33·78	34·58	33·70	33·76

(III.) DEATHS:—Ratio per 1,000.

Qrs. ended last day of	'70.	Mean '60-69.	'69.	'68.	'67.	'66.	'65.	'64.
March	26·54	25·32	24·84	22·26	25·46	26·52	27·23	27·72
June.....	22·05	22·05	21·88	20·41	21·06	24·34	22·17	22·60
September	—	20·61	20·77	23·88	20·06	21·79	21·40	21·41
December	—	22·03	23·16	21·99	21·43	21·87	22·83	23·49

B.—Comparative Table of CONSOLS, PROVISIONS, PAUPERISM, and TEMPERATURE in each of the Nine QUARTERS ended June, 1870.

1	2	3	4	5		6	7	8		9	10
Quarters ending	Average Price of Consols (for Money).	Average Rate of Bank of England Dis- count.	Average Price of Wheat per Quarter in England and Wales.	Average Prices of Meat per lb. at the Metropolitan Meat Market (by the Carcase), with the <i>Mean</i> Prices.		Average Prices of Potatoes (York Regents) per Ton at Waterside Market, Southwark.	Pauperism.		Mean Tem- pera- ture.		
				Beef.	Mutton.		Quarterly Average of the Number of Paupers relieved on the <i>last day</i> of each week.				
							In-door.	Out-door.			
1868	£		s. d.	d. d. d.	d. d. d.	s. s. s.			°		
June 30	94½	2'0	71 10	4½—6½ 5½	4½—7 5½	130—170 150	142,588	800,944	55·8		
Sept. 30	94½	2'0	59 1	4½—6½ 5½	4½—6½ 5½	120—175 147	138,284	778,804	63·9		
Dec. 31	94½	2'4	51 11	4½—7 5½	4½—6½ 5½	70—140 105	152,733	797,546	45·1		
1869											
Mar. 31	92½	3'0	50 2	4½—7½ 6	4½—7½ 6½	70—140 105	162,308	850,883	41·3		
June 30	93½	4'2	45 7	4½—7½ 6½	5—7½ 6½	60—130 95	145,094	816,260	52·0		
Sept. 30	93	2'9	50 11	4½—7½ 6½	5½—7½ 6½	95—125 110	137,406	781,382	61·4		
Dec. 31	93½	2'8	46 —	4½—7½ 6½	5—7½ 6½	75—100 87	152,021	813,753	43·3		
1870											
Mar. 31	92½	3'0	42 3	4½—7 5½	5½—7½ 6½	95—110 102	164,387	892,822	38·0		
June 30	94	3'0	44 8	4½—6½ 5½	5½—7½ 6½	115—135 125	144,226	825,337	54·4		

C.—General Average Death-Rate Table:—Annual Rate of Mortality to 1,000 of the Population in the Eleven Divisions of England.

Divisions.	Average Annual Rate of Mortality to 1,000 Living in						
	Ten Years, 1851-60.	1869.				1870.	
		Year.	Spring Quarter.	Summer Quarter.	Autumn Quarter.	Winter Quarter.	Spring Quarter.
I. London	23·63	24·66	22·25	24·31	26·66	26·73	22·04
II. South-Eastern counties	19·55	19·68	18·71	18·45	20·16	24·66	20·63
III. South Midland „	20·44	20·18	19·01	18·94	20·84	25·34	20·71
IV. Eastern counties	20·58	20·40	20·96	18·41	19·79	24·36	20·79
V. South-Western counties	20·01	19·90	20·62	17·05	20·16	26·08	21·29
VI. West Midland „	22·35	21·12	20·06	18·75	22·08	26·37	20·75
VII. North Midland „	21·10	22·04	21·74	20·02	22·05	24·93	20·71
VIII. North-Western „	25·51	25·16	23·63	23·23	25·65	28·60	23·10
IX. Yorkshire	23·09	25·80	24·79	23·87	26·45	27·36	24·72
X. Northern counties	21·99	23·21	22·63	21·34	22·83	25·08	20·84
XI. Monmouthshire and Wales	21·23	20·43	22·07	16·92	19·60	25·60	22·09

Note.—The mortality for the year 1869 is the mean of the quarterly rates.

D.—Special Average Death-Rate Table:—ANNUAL RATE of MORTALITY per 1,000 in TOWN and COUNTRY DISTRICTS of ENGLAND in each Quarter of the Years 1870-68.

	Area in Statute Acres.	Population Enumerated. 1861.	Quarters ending	Annual Rate of Mortality per 1,000 in each Quarter of the Years			
				1870.	Mean '60-69.	1869.	1868.
In 142 Districts, and 56 Sub-districts, comprising the Chief Towns.....	3,287,151	10,930,841	March ..	27·77	27·23	26·55	23·91
			June	22·81	23·42	22·78	22·22
			Sept.	—	22·98	23·32	26·84
			Dec.	—	24·53	25·75	24·25
			Year	—	24·54	24·60	24·31
In the remaining Dis- tricts and Sub-districts of England and Wales, comprising chiefly Small Towns and Country Parishes	34,037,732	9,135,383	Year	—	19·92	20·04	19·27
			March ..	24·87	22·91	22·56	20·09
			June	21·02	20·33	20·56	18·03
			Sept.	—	17·59	17·36	19·97
			Dec.	—	18·84	19·67	19·00

Note.—The three months January, February, March, contain 90, in leap year 91 days; the three months April, May, June, 91 days; each of the last two quarters of the year, 92 days. For this inequality a correction has been made in the calculations, also for the difference between 365 and 365·25 days, and 366 and 366·25 days in leap year.

E.—Special Town Table:—POPULATION; BIRTHS, DEATHS; MEAN TEMPERATURE and RAINFALL in last Spring Quarter, in Twenty Large Towns.

Cities, &c.	Estimated Population in the Middle of the Year 1870.	Births in 13 Weeks ending 2nd July, 1870.	Deaths in 13 Weeks ending 2nd July, 1870.	Annual Rate to 1,000 Living during the 13 Weeks ending 2nd July.		Mean Temperature in 13 Weeks ending 2nd July, 1870.	Rainfall in Inches in 13 Weeks ending 2nd July, 1870.
				Births.	Deaths.		
Total of 20 towns in U. K.	7,216,325	66,142	41,000	36·7	22·7	52·9	3·33
London	3,214,707	28,492	17,717	35·5	22·0	54·7	1·29
Portsmouth.....	122,084	1,012	584	33·2	19·1	53·6	1·98
Norwich	81,087	694	430	34·2	21·2	52·6	3·33
Bristol	171,382	1,568	1,119	36·6	26·1	52·1	2·52
Wolverhampton.....	72,990	696	411	38·1	22·5	53·1	2·92
Birmingham	369,604	3,214	1,674	34·8	18·1	53·5	3·05
Leicester	97,427	974	454	40·0	18·6	—	—
Nottingham	88,888	684	450	30·8	20·3	53·5	2·31
Liverpool.....	517,567	4,959	3,092	38·3	23·9	52·7	3·47
Manchester.....	374,993	3,466	2,405	37·0	25·7	53·6	4·85
Salford	121,580	1,187	685	39·1	22·5	52·3	4·94
Bradford	143,197	1,498	990	41·8	27·7	53·2	3·91
Leeds	259,527	2,732	1,605	42·1	24·7	53·5	4·13
Sheffield	247,378	2,461	1,385	39·8	22·4	53·1	3·07
Hull	130,869	1,069	649	32·4	19·8	50·5	2·65
Sunderland	100,979	987	427	37·1	16·9	—	—
Newcastle-on-Tyne	133,367	1,248	720	37·4	21·6	—	—
Edinburgh	178,970	1,854	1,116	41·4	24·9	—	—
Glasgow	468,189	5,215	3,271	44·6	27·9	51·6	6·96
Dublin.....	321,540	2,192	1,816	27·3	22·6	53·4	1·99
Paris	1,889,842	—	15,524	—	32·9	—	—
Berlin	800,000	7,491	6,012	37·5	30·1	—	—
Vienna	622,087	—	5,687	—	36·6	58·0	—

F.—Divisional Table:—MARRIAGES Registered in Quarters ended 31st March, 1870-68; and BIRTHS and DEATHS in Quarters ended 30th June, 1870-68.

1	2	3	4 5 6		
DIVISIONS. (England and Wales.)	AREA in Statute Acres.	POPULATION, 1861. (Persons.)	MARRIAGES in Quarters ended 31st March.		
			1870.	1869.	1868.
ENGLD. & WALES....Totals	37,324,883	No. 20,066,224	No. 36,506	No. 37,713	No. 36,670
I. London	77,997	2,803,989	5,967	6,376	6,185
II. South-Eastern	4,065,935	1,847,661	2,745	2,942	2,860
III. South Midland	3,201,290	1,295,515	1,576	1,723	1,646
IV. Eastern	3,214,099	1,142,562	1,517	1,535	1,496
V. South-Western	4,993,660	1,835,714	2,756	2,836	2,845
VI. West Midland	3,862,732	2,436,116	4,275	4,334	3,996
VII. North Midland	3,543,397	1,289,380	2,044	2,030	2,056
VIII. North-Western.....	2,000,227	2,935,540	6,479	6,701	6,754
IX. Yorkshire	3,654,636	2,015,541	4,333	4,532	4,251
X. Northern	3,492,322	1,151,372	2,542	2,494	2,428
XI. Monmthsh. & Wales	5,218,588	1,312,834	2,272	2,210	2,154

7	8 9 10			11 12 13		
DIVISIONS. (England and Wales.)	BIRTHS in Quarters ended 30th June.			DEATHS in Quarters ended 30th June.		
	1870.	1869.	1868.	1870.	1869.	1868.
ENGLD. & WALES....Totals	No. 203,484	No. 188,459	No. 202,892	No. 121,246	No. 118,849	No. 109,984
I. London	28,492	26,570	28,629	17,717	17,575	17,043
II. South-Eastern	17,507	16,035	16,864	10,691	9,546	8,568
III. South Midland.....	12,233	11,205	12,090	7,012	6,388	5,726
IV. Eastern	10,283	9,318	9,913	6,075	6,093	5,235
V. South-Western	14,939	14,173	15,089	9,924	9,575	7,851
VI. West Midland	24,822	22,894	25,006	14,240	13,556	12,797
VII. North Midland.....	12,604	11,320	12,296	7,037	7,326	6,662
VIII. North-Western.....	32,786	30,547	33,565	19,703	19,765	19,680
IX. Yorkshire	22,930	20,768	22,229	13,883	13,716	12,308
X. Northern	13,841	13,258	13,862	7,015	7,469	7,121
XI. Monmthsh. & Wales	13,047	12,376	13,349	7,949	7,840	6,993

G.—General Meteorological Table, Quarter ended June, 1870.

[Abstracted from the particulars supplied to the Registrar-General by JAMES GLAISHER, Esq., F.R.S., &c.]

1870. Months.		Temperature of										Elastic Force of Vapour.		Weight of Vapour in a Cubic Foot of Air.	
		Air.			Evaporation.		Dew Point.		Air— Daily Range.		Water of the Thames				
		Mean.	Diff. from Average of 99 Years.	Diff. from Average of 29 Years.	Mean.	Diff. from Average of 29 Years.	Mean.	Diff. from Average of 29 Years.	Mean.	Diff. from Average of 29 Years.		Mean.	Diff. from Average of 29 Years.	Mean.	Diff. from Average of 29 Years.
April ...	48.9	+2.9	+1.8	44.2	+0.2	39.2	-1.4	23.6	+5.2	43.4	In. .239	-0.16	Gr. 2.8	+0.1	
May ...	53.4	+0.8	+0.4	49.2	-0.1	45.1	-0.5	24.9	+4.6	—	.301	-0.03	3.4	-0.1	
June ...	60.9	+2.7	+1.9	55.4	+0.8	50.6	-0.1	24.1	+3.1	—	.369	-0.03	4.1	-0.1	
Mean...	54.4	+2.1	+1.4	49.6	+0.3	45.0	-0.7	24.2	+4.3	—	.303	-0.07	3.4	0.0	

1870. Months.		Degree of Humidity.		Reading of Barometer.		Weight of a Cubic Foot of Air.		Rain.		Daily Horizontal Move- ment of the Air.	Reading of Thermometer on Grass.				
		Mean.	Diff. from Average of 29 Years.	Mean.	Diff. from Average of 29 Years.	Mean.	Diff. from Average of 29 Years.	Amnt.	Diff. from Average of 55 Years.		Number of Nights it was			Low- est Reading at Night.	High- est Reading at Night.
											At or below 30°.	Be- tween 30° and 40°.	Above 40°.		
April ...	69	-10	In. 29.984	In. +.218	Gr. 546	Gr. + 3	In. 0.3	In. -1.4	Miles. 244	12	17	1	18.3	40.7	
May ...	73	-3	29.986	+124	539	-3	0.5	-1.7	254	10	13	8	21.3	45.5	
June ...	68	-6	29.947	+136	532	0	0.4	-1.5	242	0	6	24	31.7	52.5	
Mean ...	70	-6	29.942	+159	539	0	Sum 1.2	Sum -4.6	Mean 247	Sum 22	Sum 36	Sum 33	Lowest 18.3	Highest 52.5	

Note.—In reading this table it will be borne in mind that the sign (—) minus signifies below the average, and that the sign (+) plus signifies above the average.

The mean temperature of April was 48°·9, being 2°·9 higher than the average of 99 years, lower than in 1869 by 1°·4, but higher than in 1868, by 0°·8.

The mean temperature of May was 53°·4, being 0°·8 higher than the average of 99 years, and higher than in 1869 by 2°·9, lower than in 1868 by 3°·9, and the same as the corresponding value in 1867.

The mean temperature of June was 60°·9, being 2°·7 higher than the average of 99 years, higher by 5°·6, than in 1869, lower than in 1868 by 1°·1, higher than in 1867 by 2°·8, and of the same value as that recorded of the corresponding month in 1866.

The mean high day temperatures of April, May, and June, were higher than their averages by 4°·3, 2°·3, and 3°·7 respectively.

The mean low night temperatures of April and May were lower than their respective averages by 1°·2, 2°·2, respectively, but higher in June by 0°·7.

H.—*Special Meteorological Table, Quarter ended 30th June, 1870.*

1	2	3	4	5	6	7	8	9
NAMES OF STATIONS.	Mean Pressure of Dry Air reduced to the Level of the Sea.	Highest Reading of the Thermo- meter.	Lowest Reading of the Thermo- meter.	Range of Tem- perature in the Quarter.	Mean Monthly Range of Tem- perature.	Mean Daily Range of Tem- perature.	Mean Tem- perature of the Air.	Mean Degree of Hu- midity.
	in.	°	°	°	°	°	°	
Guernsey	29·842	71·0	35·5	35·5	28·8	11·5	51·8	82
Osborne	29·778	87·8	28·7	59·1	45·7	22·8	54·1	83
Barnstaple	29·798	80·0	31·0	49·0	38·9	17·2	54·4	79
Royal Observatory	29·812	90·2	26·0	64·2	52·4	24·2	54·4	70
Royston	29·810	86·7	26·5	60·2	51·8	25·1	53·9	75
Lampeter	29·823	83·8	26·0	57·8	46·9	20·3	52·2	75
Norwich	29·803	86·4	29·0	57·4	46·1	18·9	52·8	72
Derby	29·761	82·0	28·0	54·0	44·3	19·1	54·0	68
Liverpool	29·812	76·8	32·4	44·4	36·8	14·7	52·1	75
Stonyhurst	29·753	77·0	30·3	46·7	39·5	16·4	51·2	80
Leeds	—	84·0	30·0	54·0	46·7	22·5	54·7	68
North Shields	29·800	75·8	32·5	43·3	33·8	16·1	50·6	78

10	11	12	13	14	15	16	17	18
NAMES OF STATIONS.	WIND.					Mean Amount of Cloud.	RAIN.	
	Mean estimated Strength.	Relative Proportion of					Number of Days on which it fell.	Amount collected.
		N.	E.	S.	W.			
								in.
Guernsey	1·3	9	7	6	8	2·9	13	2·63
Osborne	0·2	6	7	8	9	4·3	18	1·88
Barnstaple	1·4	4	5	9	12	3·7	23	3·13
Royal Observatory	0·3	7	5	7	11	5·3	15	1·13
Royston	—	8	3	7	12	4·8	22	2·29
Lampeter	0·6	7	3	8	12	6·4	26	3·96
Norwich	—	7	5	6	12	—	24	3·15
Derby	—	4	5	4	17	—	27	2·70
Liverpool	1·4	4	4	6	16	5·9	29	3·41
Stonyhurst	—	2	3	5	20	6·8	26	6·82
Leeds	1·7	8	4	7	11	5·5	23	2·80
North Shields	1·7	8	3	8	11	6·2	36	4·52

No. II.—SCOTLAND.

MARRIAGES, BIRTHS, AND DEATHS IN THE QUARTER

ENDED 30TH JUNE, 1870.

I.—Serial Table:—Number of Births, Deaths, and Marriages in Scotland, and their Proportion to the Population, Estimated to the Middle of each Year; also the Number during each Quarter of the Years 1870-66 inclusive.

	1870.		1869.		1868.		1867.		1866.	
	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.
1st Quarter—										
Births	28,674	3·55	28,429	3·54	28,736	3·60	27,952	3·52	28,883	3·66
Deaths	22,184	2·75	20,431	2·54	18,036	2·26	19,977	2·51	19,095	2·42
Marriages ..	5,631	0·69	5,291	0·66	5,287	0·66	5,356	0·66	5,642	0·71
Mean Temperature }	36°·9		40°·0		40°·6		56°·5		38°·0	
2nd Quarter—										
Births	30,645	3·80	29,472	3·67	31,025	3·89	30,375	3·83	29,808	3·78
Deaths	17,984	2·20	19,449	2·42	16,928	2·12	17,475	2·20	18,575	2·35
Marriages ..	5,754	0·71	5,596	0·69	5,660	0·71	5,627	0·70	6,034	0·76
Mean Temperature }	51°·0		48°·4		51°·0		49°·0		49°·3	
3rd Quarter—										
Births	—	—	27,646	3·44	28,393	3·56	27,870	3·51	27,204	3·45
Deaths	—	—	16,532	2·06	16,662	2·09	15,125	1·90	15,470	1·95
Marriages ..	—	—	4,870	0·60	4,804	0·59	5,071	0·63	5,104	0·64
Mean Temperature }	—		56°·4		57°·4		55°·2		54°·4	
4th Quarter—										
Births	—	—	27,848	3·47	27,519	3·45	27,847	3·51	27,772	3·52
Deaths	—	—	19,377	2·42	17,760	2·22	16,491	2·07	18,210	2·30
Marriages ..	—	—	6,326	0·78	6,202	0·77	6,561	0·82	6,908	0·87
Mean Temperature }	—		40°·9		41°·5		42°·3		43°·5	
Year—										
Population.	—		3,205,481		3,188,125		3,170,769		3,153,413	
Births	—	—	113,395	3·54	115,673	3·63	114,044	3·59	113,667	3·60
Deaths	—	—	75,789	2·36	69,386	2·17	69,068	2·17	71,350	2·26
Marriages ..	—	—	22,083	0·68	21,853	0·68	22,618	0·71	23,688	0·75

II.—*Special Average Table:—Number of Births, Deaths, and Marriages in Scotland and in the Town and Country Districts during the Quarter ending 30th June, 1870, and their Proportion to the Population; also the Number of Illegitimate Births, and their Proportion to the Total Births.*

	Population.		Total Births.			Illegitimate Births.		
	Census, 1861.	Estimated to Middle of 1870.	Number.	Per Cent.	Ratio. One in every	Number.	Per Cent.	Ratio. One in every
SCOTLAND	3,062,294	3,222,837	30,645	3'80	26	2,772	9'0	11'0
Town districts	1,643,282	1,796,989	18,977	4'22	23	1,661	8'7	11'4
Rural ,,	1,419,012	1,425,848	11,668	3'27	30	1,111	9'5	10'5

	Population.		Deaths.			Marriages.		
	Census, 1861.	Estimated to Middle of 1870.	Number.	Per Cent.	Ratio. One in every	Number.	Per Cent.	Ratio. One in every
SCOTLAND	3,062,294	3,222,837	17,984	2'20	44	5,754	0'71	140
Town districts	1,643,282	1,796,989	11,533	2'56	39	3,786	0'84	119
Rural ,,	1,419,012	1,425,848	6,451	1'74	59	1,968	0'54	181

III.—*Bastardy Table:—Proportion of Illegitimate in every Hundred Births in the Divisions and Counties of Scotland, during the Quarter ending 30th June, 1870.*

Divisions.	Per Cent. of Illegitimate.	Counties.	Per Cent. of Illegitimate.	Counties.	Per Cent. of Illegitimate.	Counties.	Per Cent. of Illegitimate.
SCOTLAND	9'0						
Northern	5'9	Shetland	3'0	Forfar	9'4	Lanark	8'7
North-Western	6'6	Orkney	4'0	Perth	9'3	Linlithgow	6'2
North-Eastern	13'1	Caithness	8'5	Fife	7'8	Edinburgh	8'2
East Midland	8'9	Sutherland	6'1	Kinross	0'0	Haddington	10'6
West Midland	8'1	Ross and Cromarty	5'6	Clackmannan	9'7	Berwick	4'1
South-Western	8'3	Inverness	7'4	Stirling	7'8	Peebles	9'1
South-Eastern	7'9	Nairn	8'3	Dumbarton	7'5	Selkirk	7'4
Southern	11'8	Elgin	13'0	Argyll	9'2	Roxburgh	8'2
		Banff	14'8	Bute	8'0	Dumfries	11'8
		Aberdeen	14'4	Renfrew	7'1	Kirkcudbright	13'4
		Kincardine	10'5	Ayr	7'7	Wigtown	15'6

IV.—*Divisional Table:—MARRIAGES, BIRTHS, and DEATHS Registered in the Quarter ended 30th June, 1870.*

1	2	3	4	5	6
DIVISIONS. (Scotland)	AREA in Statute Acres.	POPULATION, 1861. (Persons.)	Marriages.	Births.	Deaths.
		No.	No.	No.	No.
SCOTLAND Totals	19,639,377	3,062,294	5,754	30,645	17,984
I. Northern	2,261,622	130,422	108	794	486
II. North-Western	4,739,876	167,329	141	1,013	689
III. North-Eastern	2,429,594	366,788	657	3,477	1,662
IV. East Midland	2,790,492	523,822	894	4,662	2,949
V. West Midland	2,693,176	242,507	356	2,131	1,294
VI. South-Western	1,452,397	1,008,253	2,288	12,478	7,476
VII. South-Eastern	1,192,524	408,962	970	4,386	2,382
VIII. Southern	2,069,696	214,216	340	1,704	1,046

No. III.—GREAT BRITAIN AND IRELAND.

SUMMARY of MARRIAGES, in the Quarter ended 31st March, 1870;
and BIRTHS and DEATHS, in the Quarter ended 30th June, 1870.

COUNTRIES.	[000's omitted].		Marriages.	Per 1,000 of Popu- lation.	Births.	Per 1,000 of Popu- lation.	Deaths.	Per 1,000 of Popu- lation.
	Area in Statute Acres.	Popu- lation, 1861. (Persons.)						
England and Wales	37,325	No. 20,066	No. 35,506	Ratio. 1·8	No. 203,484	Ratio. 10·1	No. 121,246	Ratio. 6·0
Scotland	19,639	3,062	5,631	1·8	80,645	10·0	17,984	5·9
Ireland	20,322	5,799	11,965	2·1	41,157	7·1	23,491	4·1
GREAT BRITAIN AND IRELAND }	77,286	28,927	53,102	1·8	275,286	9·5	162,721	5·6

Note.—The numbers against Ireland represent the marriages, births, and deaths that the local registrars have succeeded in recording; but how far the registration approximates to absolute completeness, does not at present appear to be known. It will be seen that the Irish ratios of births and deaths are much under those of England and Scotland.—ED. S. J.

Trade of United Kingdom, 1870-69-68.—Distribution of Exports* from United Kingdom, according to the Declared Real Value of the Exports; and the Computed Real Value (Ex-duty) of Imports at Port of Entry, and therefore including Freight and Importer's Profit.

Merchandise (excluding Gold and Silver), Imported from, and Exported to, the following Foreign Countries, &c. [000's omitted.]	First Three Months.					
	1870.		1869.		1868.	
	Imports from	Exports to	Imports from	Exports to	Imports from	Exports to
I.—FOREIGN COUNTRIES:	£	£	£	£	£	£
Northern Europe; viz., Russia, Sweden, Norway, Denmark & Iceland, & Heligoland	3,452,	628,	3,035,	672,	3,287,	457,
Central Europe; viz., Prussia, Germany, the Hanse Towns, Holland, and Belgium	7,129,	9,006,	8,647,	8,920,	6,016,	8,994,
Western Europe; viz., France, Portugal (with Azores, Madeira, &c.), and Spain (with Gibraltar and Canaries)	10,405,	4,645,	10,758,	8,719,	9,891,	8,940,
Southern Europe; viz., Italy, Austrian Empire, Greece, Ionian Islands, and Malta	1,281,	2,122,	1,915,	1,979,	1,646,	1,653,
Levant; viz., Turkey, with Wallachia and Moldavia, Syria and Palestine, and Egypt	5,826,	4,840,	5,668,	8,635,	5,937,	3,753,
Northern Africa; viz., Tripoli, Tunia, Algeria and Morocco	65,	64,	92,	78,	52,	34,
Western Africa	182,	220,	241,	258,	380,	242,
Eastern Africa; with African Ports on Red Sea, Aden, Arabia, Persia, Bourbon, and Kooria Meoria Islands	26,	85,	11,	47,	—	48,
Indian Seas, Siam, Samatra, Java, Philip- pines; other Islands	215,	349,	333,	318,	377,	418,
South Sea Islands	11,	9,	—	—	19,	—
China, including Hong Kong	3,422,	2,316,	3,323,	2,825,	2,948,	2,263,
United States of America	11,749,	7,523,	9,788,	7,761,	12,163,	5,715,
Mexico and Central America	417,	195,	457,	168,	275,	302,
Foreign West Indies and Hayti	578,	831,	520,	358,	519,	702,
South America (Northern), New Granada, Venezuela, and Ecuador	151,	500,	295,	598,	329,	696,
" (Pacific), Peru, Bolivia, Chili, and Patagonia	1,270,	1,106,	963,	707,	1,434,	625,
" (Atlantic) Brazil, Uruguay, and Buenos Ayres	1,834,	1,676,	1,894,	2,180,	1,700,	1,740,
Whale Fisheries; Grnld., Davis' Straits, Southn. Whale Fishery, & Falkland Islands	11,	1,	—	4,	—	4,
<i>Total—Foreign Countries</i>	48,024,	35,611,	47,940,	38,661,	46,973,	31,586,
II.—BRITISH POSSESSIONS:						
British India, Ceylon, and Singapore	3,121,	5,482,	4,740,	4,466,	3,610,	5,618,
Austral. Cols.—N. So. W., Vict., and Queensld.	2,797,	1,528,	1,879,	2,000,	617,	1,516,
" " So. Aus., W. Aus., Tasman., and N. Zealand	607,	572,	527,	631,	493,	646,
British North America	369,	766,	246,	653,	440,	618,
" W. Indies with Btch. Guiana & Honduras	757,	741,	760,	618,	896,	649,
Cape and Natal	614,	493,	516,	394,	412,	387,
Br. W. Co. of Af., Ascension and St. Helena	80,	193,	91,	168,	119,	143,
Mauritius	300,	134,	323,	75,	430,	127,
Channel Islands	93,	181,	70,	148,	71,	132,
<i>Total—British Possessions</i>	8,738,	10,068,	9,152,	9,142,	7,088,	9,836,
General Total	56,762,	45,679,	57,092,	42,803,	54,061,	41,422,

* i.e., British and Irish produce and manufactures.

IMPORTS. — (United Kingdom.) — **First Five Months (January — May).**
1870-69-68-67-66.—*Computed Real Value (Ex-duty), at Port of Entry (and therefore including Freight and Importer's Profit), of Articles of Foreign and Colonial Merchandise Imported into the United Kingdom.*

(First Five Months.) FOREIGN ARTICLES IMPORTED.		1870.	1869.	1868.	1867.	1866.
		£	£	£	£	£
RAW MATLS.—Textile, &c.	Cotton Wool	26,328,	21,969,	25,515,	25,884,	38,398,
	Wool (Sheep's) ..	7,942,	6,579,	4,014,	6,302,	6,073,
	Silk*	8,583,	6,252,	6,499,	6,587,	6,232,
	Flax	1,397,	1,212,	1,189,	1,124,	1,060,
	Hemp	1,684,	1,597,	1,098,	798,	1,064,
	Indigo	1,122,	1,537,	819,	975,	720,
		47,056,	39,146,	39,134,	41,620,	53,537,
	Various. Hides	1,166,	892,	819,	713,	952,
	Oils	1,372,	1,878,	1,446,	1,401,	1,889,
	Metals	1,585,	1,544,	1,489,	1,393,	1,552,
" " " "	Tallow	927,	635,	442,	243,	532,
	Timber	1,162,	1,183,	1,140,	993,	1,496,
		6,212,	5,630,	5,336,	4,683,	5,821,
	Agreitt. Guano	1,092,	385,	907,	429,	623,
	Seeds	732,	1,023,	1,118,	936,	1,058,
		1,824,	1,358,	2,020,	1,365,	1,681,
	TROPICAL, &c., PRODUCE.					
	Tea	4,910,	4,398,	4,787,	4,315,	4,359,
	Coffee	1,127,	1,414,	1,488,	1,183,	991,
	Sugar & Molasses	6,775,	5,026,	5,321,	5,504,	4,747,
FOOD	Tobacco	544,	444,	666,	586,	876,
	Rice	264,	873,	639,	166,	209,
	Fruits	519,	640,	624,	162,	62,
	Wines	2,084,	2,464,	2,389,	2,088,	2,068,
	Spirits	1,137,	986,	862,	740,	844,
		17,359,	16,245,	16,726,	14,736,	14,151,
	Grain and Meal.	11,799,	11,979,	17,370,	15,375,	10,891,
	Provisions	5,654,	5,399,	4,648,	3,296,	3,627,
		17,453,	17,378,	22,018,	18,671,	14,511,
	Remainder of Enumerated Articles	5,986,	6,920,	4,933,	2,366,	2,321,
TOTAL ENUMERATED IMPORTS		95,890,	86,677,	90,167,	83,441,	92,029,
Add for UNENUMERATED IMPORTS (say)		23,972,	21,669,	22,542,	20,860,	23,007,
TOTAL IMPORTS		119,862,	108,346,	112,709,	104,301,	115,036,

* "Silk," inclusive of manufactured silk, "not made up," amounting to 3,684,090*l.* in January—May, 1870.

EXPORTS. — (United Kingdom.) — First Six Months (January — June), 1870-69-68-67-66.—Declared Real Value, at Port of Shipment, of Articles of BRITISH and IRISH Produce and Manufactures Exported from United Kingdom.

(First Six Months.) BRITISH PRODUCE, &c., EXPORTED.	[000's omitted.]	1870.	1869.	1868.	1867.	1866.
		£	£	£	£	£
MANURES.—Textile. Cotton Manufactures ..		27,391,	25,855,	24,322,	27,501,	30,418,
" Yarn		7,306,	6,996,	7,664,	7,131,	6,681,
Woolen Manufactures		10,760,	10,840,	8,571,	9,878,	10,534,
" Yarn		2,740,	2,771,	3,423,	2,775,	2,181,
Silk Manufactures		1,203,	1,061,	1,051,	728,	869,
" Yarn		106,	94,	99,	100,	115,
Linen Manufactures		3,670,	3,473,	3,354,	3,797,	4,918,
" Yarn		1,298,	1,131,	1,213,	1,334,	1,165,
		54,474,	52,211,	49,697,	53,244,	56,881,
" Sewed. Apparel		940,	1,148,	992,	1,027,	1,347,
Haberdy. and Milnry.		2,252,	2,229,	2,102,	2,196,	2,803,
		3,192,	3,377,	3,094,	3,223,	4,150,
METALS, &c. Hardware		2,175,	2,027,	1,760,	1,896,	2,131,
Machinery		2,647,	2,278,	2,004,	2,376,	2,049,
Iron		10,651,	9,053,	6,918,	6,964,	7,498,
Copper and Brass		1,771,	1,545,	1,577,	1,441,	1,427,
Lead and Tin		2,373,	2,386,	1,939,	1,621,	1,632,
Coals and Culm		2,616,	2,298,	2,586,	2,463,	2,416,
		22,233,	19,537,	16,784,	16,761,	17,153,
Ceramic Manufcts. Earthenware and Glass		1,285,	1,316,	1,197,	1,236,	1,198,
Indigenous Mnfrs. and Products. Beer and Ale		1,111,	1,044,	1,053,	1,111,	1,159,
Butter		138,	185,	121,	131,	178,
Cheese		51,	45,	53,	60,	85,
Candles		56,	88,	110,	93,	110,
Salt		187,	201,	246,	206,	199,
Spirits		94,	97,	85,	69,	78,
Soda		700,	666,	754,	793,	760,
		2,337,	2,276,	2,422,	2,463,	2,569,
Various Manufcts. Books, Printed		278,	304,	308,	269,	276,
Furniture		96,	100,	82,	89,	117,
Leather Manufactures		1,218,	1,250,	1,123,	846,	940,
Soap		105,	100,	126,	143,	104,
Plate and Watches		219,	234,	190,	197,	203,
Stationery		235,	221,	188,	182,	178,
		2,151,	2,209,	1,987,	1,726,	1,818,
Remainder of Enumerated Articles		6,291,	5,854,	4,973,	4,861,	4,886,
Unenumerated Articles		5,146,	4,705,	4,447,	4,099,	4,202,
TOTAL EXPORTS		97,109,	91,485,	84,601,	87,612,	92,857,

SHIPPING. — FOREIGN TRADE. — (United Kingdom.) — First Six Months
(January—June), 1870-69-68-67.—Vessels Entered and Cleared with Cargoes,
including repeated Voyages, but excluding Government Transports.

(First Six Months.)	1870.			1869.		1868.		1867.	
	Vessels.	Tonnage (000's omitted.)	Average Tonnage	Vessels.	Tonnage (000's omitted.)	Vessels.	Tonnage (000's omitted.)	Vessels.	Tonnage (000's omitted.)
ENTERED:—									
<i>Vessels belonging to—</i>	No.	Tons.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.
Russia	249	98,	393	244	84,	184	61,	138	53,
Sweden	638	109,	171	537	92,	476	85,	457	81,
Norway	1,946	449,	230	2,044	472,	1,717	400,	1,580	350,
Denmark	1,042	125,	120	944	118,	1,042	118,	1,155	126,
Prussia and Ger. Sta.	1,357	425,	318	1,696	462,	1,741	480,	1,632	417,
Holland and Belgium	933	154,	165	1,050	148,	909	131,	871	112,
France	1,071	123,	115	1,102	109,	1,051	102,	1,227	113,
Spain and Portugal	240	80,	333	256	87,	268	89,	242	79,
Italy & other Eupn. Sts.	491	190,	407	455	176,	269	97,	306	97,
United States	231	248,	1,071	137	139,	270	277,	202	213,
All other States	10	9,	900	3	2,	7	3,	6	3,
United Kingdom. & Depds.	8,208	2,010,	240	8,468	1,384,	7,934	1,338,	7,816	1,644,
	12,057	4,553,	377	12,080	4,381,	11,630	4,101,	11,352	3,969,
Totals Entered....	20,265	6,563,	324	20,548	6,265,	19,564	5,939,	19,168	5,613,
CLEARED:—									
Russia	247	101,	409	223	88,	215	80,	175	57,
Sweden	574	101,	177	487	91,	450	79,	427	82,
Norway	1,480	386,	228	1,278	277,	1,111	242,	1,006	327,
Denmark	1,120	135,	120	993	117,	1,116	125,	1,284	143,
Prussia and Ger. Sta.	2,214	548,	247	2,247	552,	2,537	618,	2,342	477,
Holland and Belgium	1,029	187,	183	1,032	169,	1,094	178,	915	128,
France	2,032	263,	128	1,666	199,	2,017	218,	2,115	153,
Spain and Portugal	223	77,	345	229	82,	232	83,	215	81,
Italy & other Eupn. Sts.	772	309,	400	564	229,	411	158,	392	122,
United States	326	333,	1,024	186	177,	343	324,	259	257,
All other States	6	3,	500	9	2,	7	2,	8	2,
United Kingdom. & Depds.	10,023	2,892,	238	8,914	1,983,	9,533	2,107,	9,138	1,830,
	16,319	5,802,	362	15,344	5,415,	15,849	5,336,	14,510	4,419,
Totals Cleared....	26,342	8,194,	311	24,258	7,398,	25,382	7,443,	23,648	6,249,

GOLD AND SILVER BULLION AND SPECIE. — IMPORTED AND EXPORTED. — (United Kingdom.) — Computed Real Value for the Six Months (January—June), 1870-69-68.

[000's omitted.]

(First Six Months.)	1870.		1869.		1868.	
	Gold.	Silver.	Gold.	Silver.	Gold.	Silver.
Imported from:—	£	£	£	£	£	£
Australia	3,115,	4,	3,367,	1,	3,204,	—
So. Amca. and W. Indies	848,	1,742,	1,032,	1,291,	927,	1,770,
United States and Cal.	793,	922,	277,	510,	4,605,	1,238,
	4,756,	2,668,	4,676,	1,802,	8,736,	3,008,
France.....	52,	358,	474,	1,184,	193,	658,
Hanse Towns, Holl. & Belg.	2,	6,	22,	941,	41,	102,
Portg., Spain, and Gbrltr.....	20,	53,	33,	62,	414,	52,
Mita., Trky., and Egypt	76,	9,	69,	3,	21,	28,
China	—	11,	1,	—	—	—
West Coast of Africa	51,	1,	58,	—	55,	3,
All other Countries....	263,	281,	30,	20,	469,	34,
Totals Imported....	5,220,	3,387,	5,368,	4,012,	9,929,	3,885,
Exported to:—						
France.....	1,586,	413,	1,786,	2,210,	4,366,	812,
Hanse Towns, Holl. & Belg.	56,	794,	31,	116,	124,	2,169,
Portg., Spain, and Gbrltr.....	—	2,	—	—	303,	—
	1,642,	1,209,	1,817,	2,326,	4,793,	2,981,
Ind. and China (via Egypt).....	277,	1,622,	554,	1,743,	583,	522,
Danish West Indies	—	—	—	—	—	—
United States	70,	22,	606,	—	17,	—
South Africa	51,	—	—	—	63,	—
Mauritius	—	—	—	—	—	—
Brazil	73,	—	420,	—	573,	24,
All other Countries....	344,	260,	526,	995,	140,	106,
Totals Exported....	2,457,	3,113,	3,923,	5,064,	6,169,	3,633,
Excess of Imports	2,763,	274,	1,440,	—	3,760,	252,
„ Exports	—	—	—	1,052,	—	—

REVENUE.—(UNITED KINGDOM.)—30TH JUNE, 1870-69-68-67.*Net Produce in YEARS and QUARTERS ended 30th JUNE, 1870-69-68-67.*

[000's omitted.]

QUARTERS, ended 30th June.	1870.	1869.	1870.		Corresponding Quarters.	
			Less.	More.	1868.	1867.
	£	£	£	£	£	£
Customs	5,033,	5,515,	482,	—	5,453,	5,499,
Excise	5,266,	4,971,	—	295,	4,857,	5,028,
Stamps	2,262,	2,486,	224,	—	2,372,	2,547,
Taxes	699,	1,430,	731,	—	1,476,	1,506,
Post Office	1,170,	1,120,	—	50,	1,120,	1,150,
Telegraph Service ...	140,	—	—	140,	—	—
	14,570,	15,522,	1,437,	485,	15,278,	15,780,
Property Tax	890,	2,489,	1,599,	—	2,269,	1,577,
	15,460,	18,011,	3,036,	485,	17,547,	17,807,
Crown Lands	75,	74,	—	1,	73,	72,
Miscellaneous	773,	762,	—	11,	664,	402,
Totals	16,308,	18,847,	3,036,	497,	18,284,	17,781,
			NET DECR. £2,538,450			

YEARS, ended 30th June.	1870.	1869.	1870.		Corresponding Years.	
			Less.	More.	1868.	1867.
	£	£	£	£	£	£
Customs	21,047,	22,486,	1,439,	—	22,604,	22,581,
Excise	22,058,	20,576,	—	1,482,	19,991,	20,554,
Stamps	9,024,	9,332,	308,	—	9,366,	9,484,
Taxes	3,769,	3,448,	—	321,	3,479,	3,496,
Post Office	4,720,	4,660,	—	60,	4,600,	4,550,
Telegraph Service ...	240,	—	—	240,	—	—
	60,858,	60,502,	1,747,	2,103,	60,040,	60,615,
Property Tax	8,445,	8,838,	393,	—	6,869,	5,680,
	69,303,	69,340,	2,140,	2,103,	66,909,	66,295,
Crown Lands	376,	361,	—	15,	346,	331,
Miscellaneous	3,216,	3,454,	237,	—	2,847,	3,127,
Totals	72,895,	73,155,	2,377,	2,118,	70,102,	69,753,
			NET DECR. £359,230			

REVENUE.—UNITED KINGDOM.—QUARTER ENDED 30TH JUNE, 1870:—

An Account showing the REVENUE and other RECEIPTS in the QUARTER ended 30th of June, 1870; the ISSUES out of the same, and the Charges on the Consolidated Fund at that Date, and the Surplus or Deficiency of the Balances in the Exchequer on the 30th of June, 1870, in respect of such Charges.

Received:—

	£
Surplus Balance in the Exchequer on the 31st March, 1870, beyond the Amount of the Charge on the Consolidated Fund on that date, } as per last Account	1,782,629
Income received, as shown in Account I	16,308,594
Amount received in Repayment of Advances for Public Works, &c. ...	669,145
	<u>£18,760,368</u>

Paid:—

	£
Amount applied out of the Income to <i>Supply Services</i>	9,354,608
Charge of the <i>Consolidated Fund</i> on the 30th of June, 1870, viz.:—	
Interest of the Permanent Debt	£6,079,609
Terminable Annuities	266,749
Interest of Exchequer Bonds	11,375
Principal of Exchequer Bills	25,500
Interest of "	45,691
The Civil List	101,670
Other Charges on Consolidated Fund	865,679
Advances for Public Works, &c.	253,678
Sinking Fund	1,692,376
	<u>8,742,326</u>
Surplus Balance in the Exchequer on the 30th of June, 1870, beyond the Amount of the Charge on the Consolidated Fund, on that date, payable in September quarter, 1870, viz.:—	
Excess of Charge in Great Britain	£304,369
Surplus over Charge in Ireland	967,808
Net surplus	<u>°663,434</u>
	<u>£18,760,368</u>

* Charge on 30th June, 1870.....	£8,742,326
Paid out of growing produce in June quarter, 1870	527,520
Portion of the Charge payable in September quarter, 1870	8,214,806
To meet which there was in the Exchequer on the 30th of June, 1870	8,878,240
Net surplus as on the other side	<u>663,434</u>

BRITISH CORN.—*Gazette Average Prices (ENGLAND AND WALES), Second Quarter of 1870.*

[This Table is communicated by the Statistical and Corn Department, Board of Trade.]

Weeks ended on a Saturday, 1870.		Weekly Average. (Per Impl. Quarter.)					
		Wheat.		Barley.		Oats.	
		s.	d.	s.	d.	s.	d.
April	2	48	5	35	—	21	5
"	9	48	8	34	11	20	9
"	16	48	10	35	2	21	5
"	23	48	7	34	11	20	8
"	30	48	7	33	1	21	7
Average for April		42	7	34	7	21	2
May	7	43	3	34	2	23	1
"	14	44	5	33	9	23	1
"	21	45	3	32	5	22	—
"	28	46	4	32	11	23	10
Average for May		44	6	33	3	23	—
June	4	45	3	32	—	23	—
"	11	46	1	33	1	22	—
"	18	48	—	32	5	25	—
"	25	50	5	33	5	25	1
Average for June		47	5	32	8	23	9
Average for the quarter		44	8	33	7	22	6

RAILWAYS.—PRICES, April—June;—and TRAFFIC, January—June, 1870.

[Abstract from "Herauth's Journal" and the "Times."]

Total Capital Expended Mins.	Railway.	For the (£100). Price on			Miles Open.		Total Traffic. 26 Weeks. (000's omitted.)		Traffic pr. Mile pr. Wk. 26 Weeks.		Dividends per Cent. for Half Years.					
		1st June.	2nd May.	1st April.	'70.	'69.	'70.	'69.	'70.	'69.	31 Dec. '69.	30 Jun. '69.	31 Dec. '68.			
£					No.	No.	£	£	£	£	s.	d.	s.	d.		
58.5	Lond. & N. Westn.	130½	128	123½	1,483	1,424	3,292,	3,135,	85	85	70	—	55	—	67	6
49.9	Great Western	74	72½	67½	1,386	1,386	2,080,	2,006,	58	56	32	3	20	—	15	—
21.1	„ Northern....	125½	122	115	487	487	1,034,	994,	82	79	77	6	42	6	75	—
29.7	„ Eastern	42½	42½	38½	748	746	963,	942,	49	48	10	—	5	—	Nil	—
17.7	Brighton	45½	45½	44	368	365	562,	567,	59	60	10	—	Nil	—	12	6
20.2	South-Eastern	77½	77½	74	346	346	699,	699,	77	77	40	—	25	—	40	—
17.4	„ Western....	92½	92	89	560	553	675,	685,	46	47	52	6	40	—	52	6
214.5		84	83	78½	5,378	5,307	9,305,	9,028,	66	65	41	9	26	9	37	6
35.8	Midland	130½	126½	125	826	778	1,790,	1,625,	83	80	65	—	57	6	57	6
23.5	Leamsh. and York.	134½	131	127½	423	411	1,275,	1,230,	116	115	67	6	67	6	67	6
15.9	Sheffield and Man.	54	52½	51½	249	251	574,	592,	88	91	25	—	20	—	25	—
40.7	North-Eastern	146½	136	134½	1,275	1,260	2,128,	1,910,	64	58	72	6	57	6	60	—
115.9		116	111½	109½	2,773	2,700	5,767,	5,357,	77	76	57	6	50	7	52	6
22.3	Caledonian	74½	74½	78½	679	677	1,015,	983,	58	56	37	6	35	—	37	6
6.2	Gt. S. & Wn. Ir. land.	103	103	100	420	420	—	—	—	—	50	—	50	—	45	—
358.9	Gen. aver.	95	93	89½	9,250	9,104	—	—	—	—	46	11	36	7	42	7

Consols.—Money Prices, 1st June, 94½ to ½.—2nd May, 94.—1st April, 93½.

Exchequer Bills.—1st June, par to 5s. pm.—2nd May, par to 5s. pm.—1st April, par to 5s. pm.

BANK OF ENGLAND.—WEEKLY RETURNS.

Pursuant to the Act 7th and 8th Victoria, c. 32 (1844), for Wednesday in each Week, during the SECOND QUARTER (April—June) of 1870.

[0,000's omitted.]

ISSUE DEPARTMENT.					COLLATERAL COLUMNS.	
Liabilities.		Assets.			Notes in Hands of Public. (Col. 1 minus col. 16.)	Minimum Rates of Discount at Bank of England.
Notes Issued.	DATES. (Wednesdays.)	Government Debt.	Other Securities.	Gold Coin and Bullion.		
£		£	£	£	£	
Mins.	1870.	Mins.	Mins.	Mins.	Mins.	1869. Per ann. 4 Nov. 3 p.c.
34,56	April 6	11,01	3,98	19,56	23,45	
34,17	" 18	11,01	3,98	19,17	23,75	
33,97	" 20	11,01	3,98	18,97	23,36	
33,99	" 27	11,01	3,98	18,99	23,20	
33,90	May 4	11,01	3,98	18,90	23,87	
33,73	" 11	11,01	3,98	18,73	23,44	
33,96	" 18	11,01	3,98	18,96	23,23	
34,37	" 25	11,01	3,98	19,37	22,81	
34,54	June 1	11,01	3,98	19,54	23,01	
34,69	" 8	11,01	3,98	19,69	22,85	
34,92	" 15	11,01	3,98	19,92	22,61	
35,68	" 22	11,01	3,98	20,58	22,54	
35,86	" 29	11,01	3,98	20,86	35,86	

BANKING DEPARTMENT.

8	9	10	11	12	13	14	15	16	17	18
Liabilities.					DATES. (Wednesdays)	Assets.				Totals of Liabilities and Assets.
Capital and Rest.		Deposits.		Seven Day and other Bills.		Securities.		Reserve.		
Capital.	Rest.	Public.	Private.			Government.	Other.	Notes.	Gold and Silver Coin.	
£	£	£	£	£	1870.	£	£	£	£	£
Mins.	Mins.	Mins.	Mins.	Mins.	April 6	Mins.	Mins.	Mins.	Mins.	Mins.
14,55	3,09	8,32	17,33	,37	April 6	12,82	18,82	11,11	,91	43,67
14,55	3,10	7,29	18,04	,43	" 13	12,83	19,27	10,42	,89	43,41
14,55	3,11	7,66	16,98	,43	" 20	12,83	18,34	10,61	,95	42,73
14,55	3,11	8,07	16,35	,89	" 27	12,85	17,84	10,79	,98	42,46
14,55	3,10	8,63	16,00	,43	May 4	12,90	18,85	10,03	,95	42,72
14,55	3,12	8,88	16,34	,89	" 11	12,93	19,02	10,29	1,05	43,29
14,55	3,12	9,18	15,91	,89	" 18	12,93	18,45	10,72	1,06	43,16
14,55	3,13	9,55	16,02	,88	" 25	12,98	18,06	11,56	1,03	43,63
14,55	3,10	10,06	16,31	,41	June 1	12,97	18,98	11,53	,95	44,43
14,55	3,09	10,72	16,67	,39	" 8	13,02	19,01	11,84	,94	44,83
14,55	3,11	11,17	17,34	,87	" 15	13,02	20,21	12,31	1,00	46,54
14,55	3,12	11,86	16,34	,40	" 22	13,02	19,24	13,04	,97	46,27
14,55	3,13	13,68	17,83	,37	" 29	13,02	22,85	12,66	1,03	49,67

LONDON CLEARING; CIRCULATION, PRIVATE AND PROVINCIAL.

The London Clearing, and the Average Amount of Promissory Notes in Circulation in ENGLAND and WALES on Saturday in each Week during the SECOND QUARTER (April—June) of 1870; and in SCOTLAND and IRELAND, at the Three Dates, as under.

[0,000's omitted.]

ENGLAND AND WALES.					SCOTLAND.				IRELAND.		
DATES.	London : Cleared in each Week ended Wednesday.*	Private Banks. (Fixed Issues, 4,04).	Joint Stock Banks. (Fixed Issues, 2,74).	TOTAL. (Fixed Issues, 6,78).	Weeks ended	£ and upwards.	Under £5.	TOTAL. (Fixed Issues, 2,78).	£ and upwards.	Under £5.	TOTAL. (Fixed Issues, 6,35).
1870.	£	£	£	£	1870.	£	£	£	£	£	£
April 2	79,60	2,68	2,41	5,09							
" 9	70,65	2,76	2,46	5,22							
" 16	90,50	2,79	2,46	5,25							
" 23	60,49	2,77	2,43	5,20	April 23	1,79	2,80	4,59	3,66	3,24	6,90
" 30	66,08	2,75	2,40	5,15							
May 7	89,31	2,76	2,42	5,18							
" 14	64,14	2,73	2,39	5,12							
" 21	85,30	2,68	2,36	5,04	May 21	1,99	2,97	4,97	3,73	3,23	6,96
" 28	65,47	2,63	2,30	4,93							
June 4	85,37	2,61	2,67	4,88							
" 11	64,75	2,56	2,24	4,80							
" 18	85,28	2,52	2,21	4,73	June 18	2,05	3,13	5,18	3,58	3,10	6,68

* The Wednesdays preceding the Saturdays.

FOREIGN EXCHANGES.—Quotations as under, LONDON on Paris, Hamburg and Calcutta;—and New York, Calcutta, Hong Kong and Sydney, on LONDON—with collateral cols.

1	2	3	4	5	6	7	8	9	10	11	12
DATES.	Paris.				London on Hamburg.	New York.	Calcutta.		Hong Kong.	Syd- ney.	Standard Silver in bars in London.
	London on Paris.	Bullion as Arbitrated.		Prem. or Dis. on Gold per Mille.			India Council.	At Calcutta on London.			
		Agnst. Engd.	For Engd.								
	3 m. d.				3 m. d.	60 d.s.	60 d.s.	6 m. d.	6 m.s.	30 d.s.	pr. oz.
1870.		pr. ct.	pr. ct.			pr. ct.	d.	d.	d.	pr. ct.	d.
April 2.	25·42½	—	—	—	13·10½	108½	23½	23½	53½	½ pm.	60½
" 16.	"	—	—	—	11	108½	23½	23½	54	"	"
" 30.	"	—	—	—	10½	109½	23	23	54	"	"
May 14.	"	—	—	—	" ½	" ½	22½	" ½	"	"	—
" 28.	40	—	—	—	" ½	" ½	—	" ½	"	½ "	60½
June 11.	42½	—	—	—	" ½	" ½	23	" ½	" ½	"	" ½
" 25.	"	—	—	—	" ½	" ½	"	" ½	"	½ "	" ½

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1871. Feb. 23

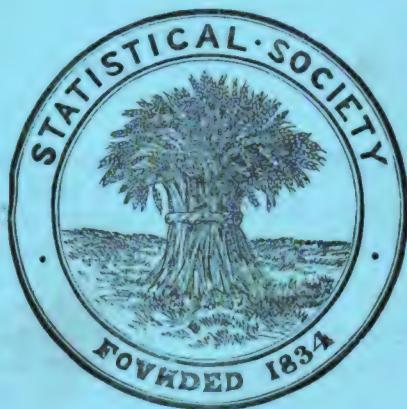
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New Business of 1869:—Sums Assured £370,495; New Premiums £13,923.

The EXPENSES of management are now only FOUR PER CENT. on the Income.

The realized PROFITS are ascertained every five years; and NINE-TENTHS of the whole are divided among the assured. As considerably more than one-tenth of the profits is derived from Policies which do not participate in the Profits, it will be seen that the *Assured have greater advantages in this Society than if they formed a Mutual Insurance Company*, dividing among themselves the whole of the profits derived from their own Policies.

The PREMIUMS are calculated for every half-year of age.

The Conditions of the Policies allow persons whose lives are insured to reside or travel in any part of the world distant more than 33° from the Equator.

Policies in the hands of third parties are not vitiated by suicide, or by the life assured transgressing the stipulated limits.

Policies are granted in conformity with the Married Women's Property Act, for the benefit of the wife and children of the Assured, which Policies are not subject to the control of Creditors.

The business of the Society includes the Purchase and the Granting of Loans upon the security of Life Interests and Reversions; also the granting of immediate Annuities.

The usual commission allowed to Solicitors on all Policies introduced by them.

The Annual Reports of the Directors are regularly printed, with full accounts of the Receipts and Expenditure, and may be obtained by written or personal application at the Office.

REPORT of the Directors, for the Year ending 30th June, 1869, read at the Annual General Meeting of Proprietors, 13th August, 1869. WILLIAM FREDERICK DE-LA-RUE, ESQ., Deputy-Chairman of the Company, in the Chair.

The Income of the year, it will be seen, amounts to £510,499 18s., and the total Charge to £445,077 10s. 9d. The difference, £95,422 7s. 3d., added to the balance of the Surplus Fund at the commencement of the Financial Year, raises that item to £1,002,974 15s. 9d., its present amount.

30TH JUNE, 1869.

Examined and approved,

(Signed)

THOMAS ALLEN, } Auditors.
HENRY ROSE. }

The Interest from investments is £120,959 12s. 10d., or £4 2s. per cent. on the net amount of the Company's realised Assets existing in June, 1868, and in connection with this important feature of the Company's affairs, the Directors have the satisfaction of reporting that the Profit and Loss Account again exhibits a considerable profit, amounting this year within a trifle to the sum of £48,000. It may be remembered that a profit of nearly equal amount was announced in last year's Report.

Turning to the items constituting the charge of the year, it will be noticed that the sum payable in satisfaction of claims on decease of Lives Assured is larger than usual. This circumstance, however, is not very material; as was observed on a previous occasion, the proper quinquennial average is generally pretty sure to obtain, and the fact that the average for the past two years barely exceeds £309,000 tends to confirm that statement.

The Expenses of Management are greater by nearly £800 than they were last year. They would have been materially less, but for the unavoidable cost of transferring the Company's securities into the names of additional Trustees. Taken as they are, however, these expenses must be regarded as very moderate. It will be observed that they are only 3 per cent. of the total income.

BALANCE SHEET.

Dr	LIABILITIES.				ASSETS.			Cy.
		£	s.	d.		£	s.	d.
Interest due to Proprietors	...	6,757	17	0	Amount invested in Fixed Mortgages	1,051,000	9	3
Claims on Decease of Lives Assured,	...				Ditto, ditto, Decreasing Mortgages	162,770	15	3
and additions thereto unpaid	...	108,940	6	7	Ditto, ditto, Reversions	278,567	16	6
Sundry Accounts	...	48,311	3	4	Ditto, ditto, Funded Securities	401,508	4	3
Liability under Sums Assured, &c.	...				Ditto, ditto, Temporary Securities	198,307	17	0
(1867)	...	6,586,036	8	3	Current Interest on the above Invest-			
Proprietors' Fund	...	173,302	10	0	ments	30,964	4	6
Surplus Fund	...	1,002,974	15	9	Cash and Bills	12,350	15	10
					Advanced on Security of the Com-			
					pany's Policies	165,367	1	8
					Agents' Balances	35,450	16	8
					Sundry Accounts	87,331	7	0
					Value of Premiums (1867)	4,846,167	18	0
					Ditto Reassurances	85,705	14	5
		£7,576,513	0	10		£7,576,513	0	10

Examined and approved,

(Signed) THOMAS ALLEN, }
HENRY ROSE, } Auditors.

The Balance Sheet does not appear to call for any remark. The Assets are, of course, increased by the sum of £95,422 7s. 3d. already mentioned, as is shown by the augmentation to that extent in the balance of the Surplus Fund.

The Direction of the Company is now constituted as follows:—

DIRECTORS.

Chairman—WILLIAM FREDERICK DE-LA-BUE, Esq.

Deputy-Chairman—ROBERT ALEXANDER GRAY, Esq.

CHARLES BISCHOFF, Esq.
THOMAS BODDINGTON, Esq.
CHARLES CHATFIELD, Esq.
SIR J. BULLER EAST, BART., D.C.L.
WILLIAM AUGUSTUS GUY, M.D., F.R.S.
CHARLES THOMAS HOLCOMBE, Esq.
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JOURNAL OF THE STATISTICAL SOCIETY,

DECEMBER, 1870.

*On the CLAIMS of SCIENCE to PUBLIC RECOGNITION and SUPPORT;
with SPECIAL REFERENCE to the so-called "SOCIAL SCIENCES."
By WILLIAM A. GUY, M.B., F.R.S., Professor of Forensic
Medicine and Hygiène, King's College, London, one of the
Vice-Presidents of the Statistical Society, &c., &c.*

[Read before the Statistical Society, 15th November, 1870.]

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IN treating of the claims of Science, I have two objects in view, the one general, the other special. I wish to show, in the first place, that Science, as distinct from Learning and Art, is eminently deserving of the support and patronage of the public; and, in the second place, that the branches of knowledge now generally known as the "Social Sciences" have special claims of their own. And I desire so to handle my subject in these its two divisions, as to promote an object our President has long had at heart,* and in which every member of this Society, and of those which are now co-operating with it, may be presumed to take a lively interest: I mean, the bringing together under one roof, with the great and obvious advantages of fixity of tenure, close proximity, facile and friendly co-operation, and economy of management; with offices convenient for the transaction of business, a spacious theatre, large meeting rooms, and well-lighted libraries and museums; of such societies, or groups of societies, as have most in common in their aims and objects.

* See Mr. Newmarch's communication to the Society on the occasion of his resigning office as Editor of the *Journal* and acting Honorary Secretary, vol. xxvi, p. 78 (March, 1863); also his inaugural address for the Session 1869-70, published in the December number of the *Journal* for 1869, p. 382.

I.—*Of Science.*

Though most men speak of science as of a something eminently entitled to consideration and respect, there are few who could give a clear account of the origin of these feelings. Like the words "civilisation" and "progress," "genius" and "taste," this word science is very hard to define or describe. It is not often, indeed, that scientific men themselves stop to inquire what the honourable title they bear really implies. But there are occasions, and this is one of them, when it is well that we should try to realise what we mean; for when men have claims to assert, and, still more, if they have favours to ask, they may expect to find those whom they address both critical and exacting.

I ask you then to bear with me for a little, while I try to clothe in words the idea I have of science. But first let me remind you of the analogous attempt I made five years since, at the first meeting of our Session 1865-66. After treating of the original and acquired meaning of the term "STATISTICS," and on the proper functions of a statistical society, I ventured to discuss the question whether there be a "SCIENCE OF STATISTICS," and, in order that I might answer that question, offered some preliminary suggestions respecting the meaning of the word "SCIENCE." By referring to dictionaries, and to the writings of such men as Sir John Herschel and Professor Sedgwick, I came to the conclusion that the word was one "of very unsettled import," and that it might have every "shade of meaning between *knowledge arranged and methodised*, "and *certainly based on demonstration*." From dictionaries and the dicta of philosophers, I turned to the sciences themselves, and found an explanation of the discrepancies I had met with in the obviously dissimilar character of branches of human knowledge to which men by common consent affix the name of science. It was evidently no easy task to find out and explain a common element in sciences so various as logic and arithmetic, music and perspective, astronomy and chemistry, physiology and psychology. I failed in the attempt then; and am not disposed to repeat it now. I must be content with reiterating the statement that science is knowledge, "with certain qualifications and reservations:" knowledge, that is to say, in its most definite, condensed, and exquisite form, dealing with worthy objects, and applied to worthy uses. And now, if we pass from science in general to sciences in particular, and survey them in detail, we shall find them conforming to these universal characteristics. We shall see that every branch of knowledge that is, by common consent, stamped with the word *science*, aims at some useful and worthy object, studies a certain defined order of things, which it identifies by accurate descriptions

and exact definitions, by expressive words and phrases; which it arranges in lucid order, under classes and sub-classes; on which it brings to bear the most delicate instruments of research and most refined methods of analysis; to which it applies, as far as practicable, the rules of logic and the figures of arithmetic; crowning the entire edifice, if it proves equal to the burden, with some comprehensive numerical theory.

This toilsome accumulation and careful assortment of materials, this close inspection and critical examination, this weighing and measuring and testing, this planning and building, and crowning of the edifice, this watchful preservation and timely enlargement of the structure, presupposes the co-operation of many minds, with varied and special endowments; and this co-operation, sooner or later, takes the form of the scientific society or association, of which I shall presently have something more to say. But I observe, in passing, that whatever claims any science may have to public recognition and support, may fitly be vested in the society which has come to represent its interests and promote its objects.

I ought to say something in this place of the relation of science to art; and perhaps I cannot do better than liken science to a leaven which, when it is brought in contact with any assemblage of objects or facts, of observations or experiments, soon pervades the whole mass, changing what was an art practised in ignorance, uncertainty, and waste, into a science replete with reasonable rules and principles, the parent of new methods of procedure, simpler, shorter, and more economical. Sometimes it happens that the leaven pervades the whole mass, as when the *art* of construction is changed into the *science* of the architect or engineer. But, in other instances its effect is partial: the leaven does not pervade the whole mass: the art is only imperfectly transmuted into a science; —as when the art of healing, uncertain and conjectural in many things, attains to exactitude and precision in the diagnosis of some diseases, and in the cure of others. Again, this scientific leaven does not always act in the same way, in the same degree, with the same speed. There are some great branches of natural history in which its working has not gone beyond the first stage of clear description and terse definition, with perhaps a tentative and provisional classification and nomenclature; others in which there are added to these certain delicate instruments of research; others in which it has become possible to express and record many facts and phenomena in the exact and condensed language of symbols and figures: a favoured few have all their facts firmly bound together by one comprehensive numerical theory. Among the claims of science which I shall presently state more precisely, this improve-

ment of the arts out of which it springs, will be found not the least worthy of consideration.

II.—*Of the Science called "Social."*

It is not a little remarkable that a period of one hundred and seventy years (from 1660, when the Royal Society was founded, to 1834, when this, the Statistical Society, came into existence) should have elapsed without any distinct recognition of the great branch of human knowledge to which we now give the appropriate and expressive name of "Social Science." The "natural knowledge" which the Royal Society was founded to improve did not comprise the study of man himself as the unit of communities and nations, but only as an organised living being. The parish registers first set on foot in 1538, followed two years later by the statute of Henry VIII enabling ecclesiastical persons and corporations to grant leases for three lives, or twenty-one years, supplied both materials and a motive for instituting inquiries into the value of life; and the London bills of mortality, commenced in 1592, to be resumed in 1603, furnished numerical data to which Captain Graunt, and Sir William Petty, writing respectively in 1662 and 1683, so applied the methods of synthesis and analysis, as unconsciously to create a new subject of study not underserving the name of science. A little later (in 1692) Halley made his attempt to construct a table of mortality from the mortuary registers of Breslau, soon to be followed by the series of valuable tables and treatises to which the names of Davenant, Gregory King, Kerseboom, De Moivre, and Simpson are attached. In 1706, these applications of the mathematics to the facts afforded by registers of death had assumed so sure a form, as to inspire the commercial world with confidence; the Amicable Assurance Society was established, and the foundations were unconsciously laid for that important branch of social science which engages the attention of the actuary. The next great step towards the building up of a social science, was taken when John Howard set the first example of the study of the condition of an important section of the community by the truly scientific method of laborious inspection and exact record, on a uniform system, of the facts observed. In these prison inspections it is impossible not to recognise the model and exemplar of some of the most useful inquiries in which this Society has engaged; such, for instance, as the inquiry into the condition of Church Lane, St. Giles's.

But already, nearly a quarter of a century before the date of Howard's prison inspections—in the year 1749—Gottfried Achenwal, Professor of Law and Politics at Göttingen, had recognised under the name *STATISTIK*, that State science which we cultivate here.

It was not, however, till 1833, when Quetelet had given an impulse to numerical studies of man physical and moral, by the publication of the papers which were soon to grow into the "*Essai de Physique Sociale*," that the British Association for the Advancement of Science added a Statistical Section to the five already existing; and not till the following year that this Society was set on foot. Its object was to procure, arrange, and publish "facts calculated to illustrate the condition and prospects of society," "and, as far as it may be found possible, facts which can be stated numerically, and arranged in tables." This, then, was the distinct and formal recognition of that science which we now call "social." That it deserves the name of science I endeavoured to prove in the paper to which I have already referred, as read and published in our *Journal* five years ago. Assuming, then, the existence of a social science, of which many of the materials had been in process of collection for three centuries, but of which the full and complete recognition dates from the foundation of this Society in 1834, I proceed to show that this new science of man has had a history in keeping with that of the "natural knowledge" which the Royal Society was established to improve and promote. The Royal Society was founded in 1660, and had continued its multifarious scientific labours till 1831, when it may be said to have given birth to the British Association for the Advancement of Science. In this nineteenth century, the march of events is quicker; and accordingly the science which had its first embodiment in the Statistical Society of 1834, found its British Association in the Social Science Association of 1857—an interval of less than a quarter of a century.

In the Social Science Association, therefore, we acknowledge a second development and modified culture of that branch or division of human knowledge—that science of States—to which we had previously given the name of Statistics. Our two societies have a common aim—the improvement of man's condition physical, intellectual, and moral, through the patient heaping up, intelligent sorting, and critical examination of the elements of a knowledge which, properly applied, is power indeed.

Of this "social science" let me further observe, that it differs from most other sciences chiefly in this, that its units are of variable magnitude, and that its truths and principles, gathered from large assemblages of such units, admit of application only to like collections of facts, not to the individual units themselves. The actuary has the function of first establishing truths of this order, and then applying them; the statist must look to the statesman to carry into effect the practical works of justice and benevolence. And here, while I point out this fortunate conjunction of theory and practice in the labours of the actuary, I am sure that I express the sen-

timent of every member of this Society, when I say with what satisfaction we view the ties which hold our two societies together, and with what lively pleasure we should hail the day that saw the Statistical Society, the Social Science Association, and the Institute of Actuaries under the same roof, working side by side, in harmonious co-operation, with the one common aim—"the improvement of man's estate." But is it not obvious that this principle of association admits of being carried much farther, so as at length to embrace in one group, under one roof, all the societies or associations that make man himself, as a physical and moral unit, the object of their study?

And now I pass on to a further consideration of science, as represented by the scientific society or association.

III.—*Of Scientific Societies and Associations.*

If I found it difficult to define the word science, I do not find it easy to identify the scientific society or association; and for the simple reason that no two scientific bodies are found to be exact counterparts of each other. There are some few, for instance, that are exclusively dedicated to the culture of the branch of knowledge after which they are named, while others much more numerous blend scientific culture with objects not less worthy perhaps though different. Thus there are examining and licensing bodies, such as our colleges of physicians and surgeons, with whom the promotion of science has been only one among several objects; but these powerful and useful institutions, which are almost identified with the great names of Harvey and Hunter, cannot be properly omitted from any list of scientific bodies claiming to be comprehensive and complete. Again, there are associated bodies of which a chief object is to promote science rather as teachers than as students. Such is the Royal Institution, with whose past history the great names of Davy and Faraday are inseparably associated—I am tempted to say as living products of its laboratory. Nor could we rightly exclude from the list of scientific societies such printing clubs as the Sydenham, the Ray, the Wernerian, and the Cavendish; or the "Surtees Society," which charges itself with the publication of MSS. illustrative of the moral, intellectual, religious, and social condition of certain parts of England and Scotland, and so claims a place among the cultivators of social science.

If I am allowed to take this large and comprehensive view of scientific societies and associations, I should begin the history of such institutions in England with the Royal College of Physicians, founded in 1518 by the learned, accomplished, and munificent Linacre, and privileged a century later (in 1616) to hear from the lips of William Harvey, their Lumleian lecturer, the first true

description of the circulation of the blood. The next subject that engaged the attention of any associated body, was antiquarian lore. As early as 1572, Archbishop Parker originated the Society of Antiquaries, which held its first meeting at the house of Sir Robert Cotton. But the society alarmed James I, who accordingly dissolved it; and it remained in abeyance till 1707. Meanwhile, in 1660, the Royal Society was founded, and in 1662 received its charter. It may be said to have originated somewhat earlier—in 1645. With the exception of a similar society at Rome, it is believed to be the oldest of its kind in Europe. It was the sole representative of science under the name of “natural knowledge” during what remained of the seventeenth century, and up to the year 1707, when the Society of Antiquaries was resuscitated.

If we would learn how the three associations that satisfied our ancestors in the seventeenth century and early part of the eighteenth, have grown into a multitude in this the nineteenth, we have only to refer to the pages of such a work as Hume’s “Learned Societies and Printing Clubs,” or to some current printed list. I will pass these societies rapidly in review, without stopping to criticise the claims of each society to the title of scientific.

In what remained of the eighteenth century, the Society of Arts (1753), the Physical Society of Guy’s Hospital (1772), the Medical Society of London (1773), and the Linnæan Society (1788), four in all, took their rise.

The first quarter of the eighteenth century witnessed the formation of the Royal Institution (1800), the Horticultural Society (1804), the Medical and Chirurgical (1805), the Geological (1807), the Institution of Civil Engineers (1818), the Royal Astronomical (1820), the Royal Medico-Botanical (1821), the Royal Society of Literature and the Royal Asiatic (1823): nine societies in all.

During the second quarter of the century, the Zoological Society (1826), the Incorporated Law (1827), the Royal Geographical (1830), the British Association for the Advancement of Science and the United Service Institution (1831), the Provincial Medical Association (1832), the Entomological (1833), the Royal Institute of British Architects, and this, the Statistical Society (1834), the London Electrical (1835), the Botanical and the Numismatic (1836), the Royal Botanic and the Microscopical (1839), the Pharmaceutical and the Chemical (1841), the Philological (1842), the Ethnological, the Archæological Association, and the Archæological Institute, with the Sydenham (1843), the Syro-Egyptian, the Ray, and the Wernerian (1844), the College of Chemistry (1845), the Cavendish (1846), the Palæontological (1847), the Institute of Actuaries (1848): in all twenty-eight societies.

In the twenty years that have elapsed since these societies were

instituted, we have seen several others added to the list—the Epidemiological for instance, in 1850, and one of which, as specially connected with my present design, I would make honourable mention; I mean the Social Science Association, set on foot in 1857, and since maintained in active usefulness, through the exertions of Mr. Hastings.

In this imperfect list of scientific societies and associations, some few are included that belong rather to the domain of literature and art than to that of science properly so called; but it is probable that the number excluded through inadvertence is at least equal to that of those wrongfully admitted; and I have little doubt that after the most rigid exclusion of all societies and associations not belonging to the category of science, there would remain at least fifty distinct bodies of educated and intelligent men, with London for their head quarters, committed more or less fully and earnestly to the culture and support of every branch of knowledge which can claim for itself a distinct name, or separate organisation.

I should like to have classified the scientific societies and associations according as their scope is more or less wide, their objects general or special; to have separated the societies that simply cultivate some branch of knowledge from such as may be said to constitute themselves the representatives and guardians of the interests of some special profession engaged in the active business of life; to have said something more about our great examining bodies, such as the Royal College of Physicians and Surgeons, and the University of London; something of our two metropolitan colleges (University and King's); something, too, of the museums and educational bodies directly supported or partially assisted by the State—the British Museum, the Hunterian Museum of the College of Surgeons, the Geological Museum in Jermyn Street, the South Kensington Museum, the Record Office, the museum of the United Service Institution. But I resist the temptation to dwell longer on these topics, and proceed to take special notice of the societies and associations that may be said to devote themselves to the culture of social science.

First among these in order of time is our own Society, founded, as I have already reminded you, in 1834, and now in close alliance with the Institute of Actuaries, which dates from the year 1848. The Social Science Association, set on foot in 1857, in like alliance with the Law Amendment Society, and bearing some such relation to the Statistical as the British Association for the Advancement of Science does to the Royal Society, may be said to constitute a nucleus of four societies, having similar objects and pursuits, round which other organised bodies may be reasonably expected to group themselves. If we enlarge our notions of "social science" so that

it may embrace all those societies that have for their object the study of man himself, we may expect to attract to ourselves such bodies of scientific men as the Ethnological and Anthropological Societies; perhaps the Archæological; certainly the Epidemiological and other societies that cultivate the wide and fruitful field of hygiene. These cannot fail, I think, to acknowledge a common aim and object, at least to the extent of desiring to live side by side in some common home, or to occupy some distinct section of any building that may hereafter be erected for the accommodation of the many societies which now exist where they are, with inadequate accommodation and only upon sufferance.

I will assume the co-operation of these societies at least to this extent, and proceed to give you some idea of the number of persons who, as members of these societies, must be interested in obtaining better and more permanent accommodation.

The Statistical Society and Institute of Actuaries, not reckoning 47 duplicate members twice, have a joint constituency of 608.* The Social Science Association has, in round numbers 1,500. The Ethnological and Anthropological together, also in round numbers, 750; and if the Epidemiological and one or two smaller societies were added, we should have little short of 3,000 promoters and cultivators of the social sciences who may be expected to co-operate in the wholesome effort to improve their condition in this important particular. But if, as seems likely, any building that it may be found expedient to erect would provide accommodation for more societies than I have named, we may hope to obtain the concurrence and active support of a very large body of scientific men.

If the societies which desire either larger accommodation or a more certain tenure, could be induced to co-operate, the aggregate numbers would be found to exceed 10,000.†

IV.—Of the Claims of Science to Public Recognition and Support.

Science has found favour, encouragement, and support under every form of Government. Kings have acknowledged that it adds lustre even to thrones, and republics have deemed it quite consistent with their sterner virtue to hold out to it the hand of fellowship. Of this we have had a recent notable example in the pecuniary assistance and means of transport afforded by the United States to two parties of its citizens bent upon voyages to Spain and Sicily to view the total eclipse of the 22nd December. And though

* An analysis of the lists of the two societies shows that they contain some influential elements, among which I may mention fifteen peers and thirty-one members of parliament.

† The Society of Arts has 3,339, and the United Service Institution 3,850 members.

our own Government at first declined to convey to their destinations the two observing parties to whom our scientific societies had already voted large sums of money, thus leaving the Government of the United States the honour of supplying our shortcomings, I am happy to say that better and more liberal thoughts prevailed at last. For in justice to our own Government, it ought to be stated that this want of sympathy with the scientific societies which, by helping themselves, had earned the right to invoke aid from higher powers, would have been quite an exception to the rule in England. It could only have occurred during one of those cold fits of economy to which the nation is subject at the close of some feverish paroxysm of prodigal expenditure; or it may have been an outbreak of the hypochondriac fancy that they are on the brink of ruin which is apt to seize the richest nations no less than the wealthiest individuals.

It is refreshing to turn from an occurrence which for a time carried disappointment and discouragement into the ranks of scientific men, to the more pleasing duty of setting forth the claims of science, and of showing how cheerfully they have been acknowledged by the nation and Government in the times that are passed.

Science, in the sense of knowledge of the more precise, exact, and exquisite order, sets up her claim to public recognition and support on the ground of benefits conferred on the nation in the shape both of honour and profit. She shares with righteousness the prerogative of exalting a nation; for the love of truth, which causes men to seek after knowledge, and the patient industry and self-denial which are the first conditions of the search, are among the manly virtues that give strength and solidity to a people. Hence science must be preferred before learning, as being more practical, and coming into more direct contact with the realities of life; before art, as less apt to be turned to unworthy uses, more sure not to become an agent of effeminacy and luxury.

But it is not to be expected of the mass of mankind that they should value scientific pursuits for the virtues which they foster. To them it will be more to the purpose to address the argument of utility; and happily this is of overwhelming cogency, as the examples I am about to adduce will abundantly prove. The science with which I am most familiar, and in which I have long taken the liveliest interest, is hygiene; and I have lately had occasion to study closely certain of its achievements with which I had long been tolerably familiar. Now within the short space of about thirty years, four men who more or less consciously addressed themselves to the investigation and prevention of disease by scientific methods, conferred first on this nation, and through it on all mankind, these benefits. Sir George Baker, by a series of logical eliminations and ingenious inferences, which will not suffer by comparison with the celebrated

essay on "Dew" of Dr. Wells, detected the cause of the Devonshire colic, and threw a flood of light on the colic of Poitou and Jamaica, and on the insidious poison of lead wherever it was found to be in operation. Captain James Cook, by applying on board ship the truths which science had imperfectly established, so kept the scurvy and its fatal attendants in check, so economised life among his crews, as to earn the Copley medal at the hands of the Royal Society. John Howard, by his prison inspections, marked by all those characters of industry, accuracy, and perfect truthfulness which distinguish the best labours of the modern statist, revealed to our ancestors the jail fever in all its loathsomeness, as the bane of our civil population, the scourge of our armies and fleets. Edward Jenner, by his truly scientific treatment of facts known in and around the dairies of several of our English counties, gave to us and to the world the boon of vaccination. By what figures of arithmetic shall I attempt to measure the greatness of these four gifts of science, freely bestowed upon us, and upon all men everywhere, in the short space of a single generation? I believe it to be no exaggeration to affirm that the great war of the French revolution was brought to a successful issue as much through the lives thus saved, as by the valour of our soldiers and sailors. Such have been the triumphs, such the precious gifts of this one science of *hygiène*.

I will take one other science—the science of the chemist. Who is there among us so ignorant as not to know that the whole history of chemistry from first to last is one unbroken series of purely scientific discoveries made for love of truth, without thought or hope of reward, but, sooner or later, turning to profit in the hands of our manufacturers? Take as an illustration the metal sodium, discovered by Sir Humphrey Davy in 1807. It was a discovery of pure science, and continued for a time to be a chemical curiosity; but now it is made by the hundredweight, and largely used in the manufacture of aluminium and magnesium, both of great and growing importance in the arts. Or take the purely scientific discovery of Professor Daniell. The deposit on the negative electrode of metallic copper from a solution of one of its salts, as the result of a laboratory experiment, turned out to be the central and radical fact round which gathered the processes of electro-casting, plating, and gilding; and I well recollect my former colleague, once and again referring to this scientific discovery of his, as having conferred some honour on himself but much wealth upon others. Need I remind you of the recent history of the great art of photography, or of the somewhat older history of the electric telegraph, both of them offsprings of pure science; need I speak of the microscope, and of its profitable use by the custom-house authorities; need I insist on

the manifold obligations under which science and scientific men have laid us for all the arts that make this, our civilised existence, to differ from the rude life of the savage? There is not a man in this room who could not pile instance upon instance of pure science ripening into practical utility. Among so many examples, we are embarrassed by the difficulty of selection. The mind becomes perplexed and bewildered in the attempt to grasp the multitudinous facts that illustrate and embellish the great central truth.

But I must not forget that I have something yet to say of the special claims of those branches of knowledge known as the *social sciences*. I have spoken of the electric telegraph as an offspring of pure science. What shall I say of the penny post, with its "moral, "social, and economical advantages;" its spreading benefits and constant developments? I claim it without hesitation as an achievement of science. It was by truly scientific inferences from ascertained facts that Sir Rowland Hill, an honoured member of this Society, was led to expect that fivefold increase in the number of letters which formed the chief among the convincing arguments that led the nation to adopt his grand project of reform. It was by similar scientific procedures that a recent considerable economy in the cost of the dietaries of our convicts was commended and brought about. But the members of this Society have not far to seek for an illustration on the grandest scale of the application of pure science to the highest uses. Our respected associates, the Institute of Actuaries, know well what I mean. Their privilege is to moderate the anxieties of the life which science in more than one of its practical applications has virtually lengthened, by scientific calculations of the value of life, and the risks of property.

But there is another and very important view of the services we render to the public, and the consequent claims to State recognition and support of this Society, taken as the exponent of a great social science. The scientific labours of our members, inspired by a mere love of truth, looking to no pecuniary reward, and bearing directly on the very questions which come under discussion in the legislature, are in many cases a direct saving of expense to the nation, sometimes by rendering some costly return unnecessary, sometimes by doing the necessary work of condensation and analysis. An important return is made to Parliament. It abounds in tables and columns of figures. The work of analysis, which must be undertaken if the return is not to become so much waste paper, if Parliament and the public are to profit by the expense incurred—this work of analysis is done by some member of the Society seized with a wholesome curiosity to know the truth. He bestows upon it time, and thought, and the skill acquired by practice; he submits

his work to our criticism; his paper is published in our *Journal*, at our proper cost; and thus the public and the Government save money and become possessed of wholesome and fruitful truths. The admirable paper by Sir Rowland Hill, read here in May, 1841, and published in the *July Journal* of that year, is a case every way in point; so is the elaborate and exhaustive series of papers on electoral statistics, for which we were indebted to our President, to say nothing of the contributions to mercantile, trade, and banking statistics with which he has enriched our *Journal*. How can I speak in fitting terms of praise of such papers as those with which, a few years since, Mr. Hodge illustrated the mortality arising from naval and military operations; how of such exhaustive treatises as those of Mr. Lumley on the poor law; how of the labours of a score or more of fellow workers, past and present, whose names are mentioned with honour wherever science is held in esteem! Of all their labours I may safely affirm that, while they have benefited the public, they have effected a direct and appreciable saving of money which, but for them, the Government itself must have expended. And this which is true of our own Society may be safely affirmed, in its degree, of the Institute of Actuaries, and of the Social Science Association.

Such, then, are the claims of science, and of the societies which cultivate and represent it, to public recognition and support; and such the special claims of this Society, and of the other representatives of social science.

I now proceed to treat of the precedents in favour of such recognition and support, to be found in the past and present action of Government.

V.—Of Precedents.

This paper, it will be seen, has been throughout suggestive rather than exhaustive. I shall continue to give it this character; and shall rest content under this head of precedents, with adducing a few instances only of public recognition and support to science.

1. *Royal Society*.—Grant by the Crown of the college and lands in Chelsea, sold in 1682; subsequently of apartments in Somerset House; still later of apartments in Burlington House. Ample accommodation in course of being provided in the new buildings erecting on that site.

2. *Society of Antiquaries*.—Grant by George III of apartments in Somerset House.

3. *Geological Society of London*.—Grant by the Crown of apartments in Somerset House.

4. *Royal Astronomical Society*.—Grant by the Crown of apartments in Somerset House.

5. *Royal Asiatic Society*.—An annual donation of 100 guineas from the East India Company.

6. *Royal Geographical Society*.—Two gold medals, presented annually by Her Majesty.

7. *Chemical Society*.—Apartments to be provided in the new building at Burlington House.

The foregoing (with the exception of the last) are extracted from Hume's "Learned Societies and Printing Clubs." The following are taken from the "Civil Service Estimates for 1870-71, "No. IV."

1. *South Kensington Museum*.—Vote of 37,659*l*.

2. *School of Mines and the Geological Museum, Jermyn Street*.—Vote, 10,704*l*.

3. *College of Chemistry*.—Vote, 820*l*.

4. *Geological Survey of the United Kingdom*.—Vote for England, 13,127*l*.

5. *British Museum*.—Vote, 91,665*l*, of which 900*l*. is the produce of 30,000*l*. Reduced Three per Cent. Annuities directed to be applied in aid of salaries and other expenses by 26 Geo. II, cap. 22, sec. 48.

6. *National Gallery*.—Vote, 16,181*l*.

7. *National Portrait Gallery*.—Vote, 1,800*l*.

8. *Royal Society*.—Vote, 1,000*l*., and 10,000*l*. to its meteorological committee.

9. *Royal Geographical Society*.—Vote, 500*l*.

10. *University of London*.—Vote, 9,577*l*. A handsome and commodious building recently erected at Burlington House.

Among these Votes, Nos. 3, 8, and 9 are of special interest to us, being grants to societies, as distinct from money voted to institutions and objects under the direct management of the Government. Some of the grants, as 1, 4, 5, 6, 7, and 10 it will be seen, are for objects not purely and simply scientific.

Other grants of public money to scientific societies, are to be found in estimates other than those for Civil Service, No. IV. Thus the United Service Institution receives a grant of 600*l*. a-year, of which 300*l*. figures as an item in the army, and 300*l*. in the navy estimates. It has also the use of a building at Whitehall, containing museum, theatre, and offices.

It would be easy to add to this confessedly imperfect list of State aids to scientific institutions having their home in London (for I exclude grants to Scotland and Ireland), such cases as the College of Physicians and their site at Trafalgar Square; the College of Surgeons, and their Hunterian Museum, purchased by the State; the Royal Society of Literature, with George IV's princely gift of 1,100 guineas a-year and a site; and King's College and its site,

granted by the Crown at a nominal rent, in exchange for service rendered to the public in completing the east end of Somerset House and its terrace. The Mechanical Museum of George III, given to the college on condition of its providing a suitable room and safe custody, also deserves a passing notice. Of gifts in money to men who have cultivated science with success, the Parliamentary grant of 30,000*l.* to Edward Jenner, and the scientific annuities to be found on the pension list are examples. But these are of less present interest than the assistance given to scientific societies. I think, too, that I may mention with propriety, as a flattering instance of aid afforded to the science we cultivate, the graceful courtesy of the Government in placing Westminster Hall and its accessories at the service of the Social Science Association, that it might hold the conversations which closed the successful London meeting of 1862. The timely accommodation which King's College was fortunate enough to be able to afford to the Statistical Congress of 1860, as guests of the Government, may also be deemed worthy of mention in this place.

To these precedents of State support, I add two illustrations of the extent to which scientific bodies have helped themselves when called upon to place a building on the sites given to them :—

1. When George IV made the Royal Society of Literature a present of a piece of land opposite St. Martin's Church, the members voluntarily subscribed 4,300*l.* to build a house upon it.
2. When the king gave the College of Physicians their site in Pall Mall, the fellows and members contributed nearly 14,000*l.* towards the sum of 25,000*l.* expended on the building.

VI.—*Claims of the Statistical Society; a Building Site.*

The precedents just adduced will suffice to show that the Crown and Government of England have given liberal encouragement and support to science for a period extending over nearly two centuries, and that this encouragement and support have assumed more than one shape. There have been gifts in money to individuals and to societies, house accommodation, and convenient building sites; and it may be observed, as a rule, that while grants once made have been continued, new obligations have been cheerfully incurred. Of this I am able to adduce a substantial instance in the buildings now in course of erection at Burlington House. Among the six societies for which the Government are providing this handsome accommodation, there are two (the Chemical and Linnean) which had established no claim by previous occupancy of Somerset House. Assuming now, what I believe I am fully justified in doing, that the Statistical Society, during its thirty-six years of scientific activity, has established a strong claim to the patronage and support

of Government, and assuming further that that claim would be greatly strengthened by the friendly co-operation of the Social Science Association, of the Institute of Actuaries, and of other societies having analogous objects, I proceed to intimate the form which, in my judgment, our application for assistance ought to take, and also to offer, on my own responsibility, some suggestions of a definite and, as I believe, practical kind.

I think that I fairly represent the views of this Society and of the other societies which have associated themselves with us, when I say that we have never contemplated any other application to Government than that for a site. But we would not have this our moderation misconstrued; for I have often heard the opinion expressed that we have as good a claim to house accommodation as more than one of the societies to whom that boon has been accorded.

In applying to Government for a site, we should have, as I think, very convincing arguments and inducements to offer—arguments arising out of the obvious difficulty in procuring a suitable site by purchase in the open market, and inducements based on a certain benefit to be conferred on the public in return.* Of the precedents just brought forward, two at least may be used in illustration of my meaning. For many a long year Somerset House, now one of the stateliest ornaments of the Embankment, which so gracefully connects St. Paul's in the east with the Houses of Parliament in the west, promising to be for London and the Thames, all that the noble line of buildings and ornamental open spaces that stretch along the Seine, in one unbroken line, from the *Barrière de l'Etoile* to the *Hôtel de Ville*, is for Paris,—for many a year the river front and terrace of Somerset House stood unfinished, and might have so remained to this day, but for the interchange of services between the Government and King's College, by which the noble façade was completed, and a site secured. The other case is that of the College of Physicians, which spent 25,000*l.*, on a building worthy of “the noblest site in Europe,” in acknowledgment,

* In making application to the Government, we might, I think, submit the following considerations:—

1. That there is no way in which we could hope to raise such a sum of money as would purchase a really eligible site.

2. That even if we could purchase such a site, we could not make ourselves secure against the intrusion of some unwelcome and unsuitable neighbour—as, for instance, some noisy place of refreshment or entertainment.

3. That after the purchase of a site open to these objections and inconveniences, we could not hope to be able to erect a building in all respects such as we could wish.

4. That in the event of the Government acceding to our request, part of the money, which must otherwise be spent upon an inferior site, might be expended in making the building more worthy of the position it would occupy.

as it were, of the liberality which had placed the ground at its disposal.

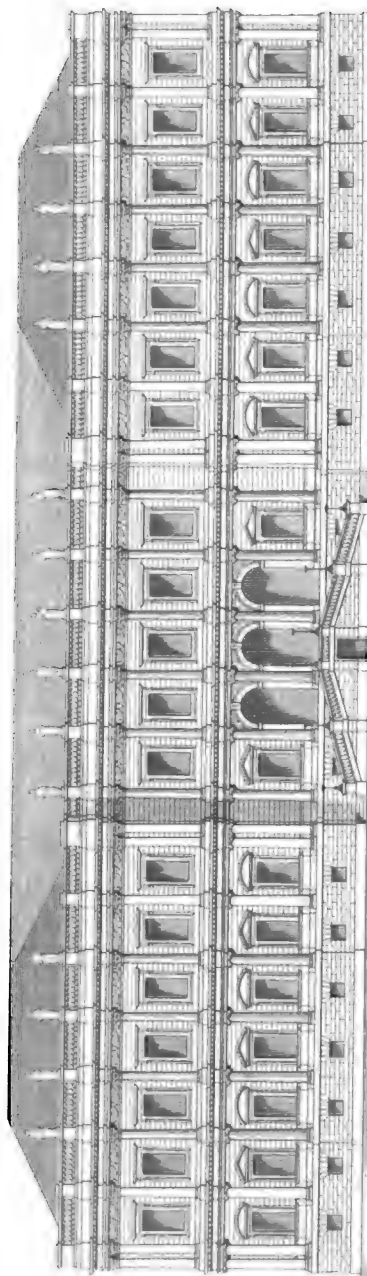
Encouraged by these precedents, I will set out in search of a site, very naturally attracted to the Embankment, and desirous of contributing something to its adornment, or to that of some thoroughfare leading to it. I know that the Government owns a considerable tract within the space comprised between the Embankment and Whitehall, bounded by Whitehall Place to the north, and the residence of the Duke of Buccleugh to the south. I know of no spot in all London so well suited to be the home of societies and museums as this. It is not traversed by any public thoroughfare, and is accessible both from Whitehall and from the Embankment. With the exception of the private residences in Whitehall Gardens, a small plot marked with the name of Lord Gage, and the larger one that belongs to Lord Carington, there is, I believe, no building that is not in the possession of the Government, or under its control, and there are also large spaces of ground unoccupied. The whole plot is characterised in an unusual degree by structural shabbiness, disorder, and neglect. The buildings, with hardly an exception, are low, mean, and curiously ugly; while the one handsome structure, the banqueting hall of the glorious palace of Inigo Jones, put to the most inappropriate of all possible uses, has a stable for its next neighbour. It is necessary for the purpose I have in view that I ask your special attention to this charming specimen of Italian architecture. As we walk from it towards the Houses of Parliament, we encounter first the stables in question, then the not very attractive Poor Law Board, then a perfectly useless open space, occupied by a few stunted trees; a space for the retention of which as open ground not the most enthusiastic of sanitary reformers would venture to put in a plea. I earnestly advocate the pulling down of the intrusive stables, and shabby Poor Law Board, and the covering of the open space. No one who studies this part of London, with a view to economy of space and architectural fitness and beauty, can fail to perceive that the banqueting hall is the key of the position; and that to make any improvement worthy of the name, we must first build a chapel on some adjoining plot of ground. This done, the staircase that now gives access to the hall would have to be taken down, and the north end brought into harmony with the east and west façades. The banqueting hall should be repeated on the open space, and part of the site of the Poor Law Board, and the twin structures connected by a centre containing a handsome recessed entrance. This centre might be of greater or less extent according to the purpose for which the whole building is designed. If we suppose the ends of the building to receive as much light as is consistent with the style of the structure, and the centre to be

lighted from above, we should have one of the finest museums in the world, with Rubens' Apotheosis of James I. looking down on something more appropriate than the services of a christian place of worship; and if we further suppose the building to be given over to the United Service Institution, with the obligation of maintaining it in a fit state, and with its own collections supplemented by instruments of warfare offensive and defensive—with suits of armour and coats of mail, with swords and spears, arms of precision, mitrailleurs, and heavy ordnance—the new building would be put to a use which the public would be sure to approve and appreciate. Here, in a noble building, facing the Horse Guards, in near proximity to the Admiralty, and with ready access to the Embankment, the people might recreate themselves with a sight of all that man has done, or is doing, to promote the work of destruction. On the site of the temporary United Service Museum, the new Poor Law Board might be erected. If I am asked for precedents, in making this suggestion, I point to the Hunterian Museum in the College of Surgeons, and George III's Museum at King's College.

I suppose the new chapel to be built on the line of the wide footpath leading from Whitehall to the Embankment, but considerably in the rear of the present chapel; and opposite to it between the existing United Service Institution and the Embankment Gardens I find the spot of ground which, as I venture to suggest, we might ask the Government to cede to our use.

My friend Mr. Bellamy has been good enough to put my architectural theories upon paper, with the discretion and good taste which I believe him so eminently to possess. I send round a block plan showing the laying out of the ground, and an elevation showing the banqueting hall enlarged. Mr. Bellamy has also prepared a plan for the Learned Societies' Accommodation Committee, which, if it come to occupy the site in question, will not do discredit to the embankment, or to its architectural neighbours.

In the scheme I have ventured to submit, I do not find anything unreasonable or impracticable. But if it does not assist in procuring for us the boon of a suitable site, it may possibly give a little impetus to a work that the Government ought not to shrink from or delay. Mr. Pennethorne's report and plans on "the Thames Embankment and Horse Guards Street," submitted to the Government in 1868, has become a dead letter and waste paper in consequence of a recent vote of the House of Commons; and the subject will have to be reconsidered. But whatever the fate of the suggestions I have dared to offer, I trust that we shall see our way to make application for a site at or near the spot indicated, that that application, if made, will be favourably entertained, and that



HARRIS & JONES Bldg.

ELEVATION.

St. Marcus Lane W.C.

ELEVATION.

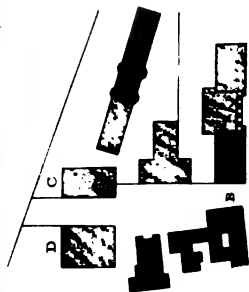
Showing the Banqueting Hall, repeated with a connecting Central Block.

Thomas Pellony, Archt.

A. House & wards B. Banqueting Hall
C. Chapel D. Proposed Site
Light Shading, New Buildings

PLAN.

Showing the suggested site of the Scientific Societies House and adjacent buildings.



SCALE OF FEET.
0 50 100 150 200

GROUND PLAN.

C. Chapel D. Proposed Site
Light Shading, New Buildings

we may be allowed to contribute somewhat to the architectural attractions of the Embankment and its approaches.

But happen what may, I am sure that I have said nothing unworthy of my theme, and nothing which ought to prejudice the chances of our obtaining a suitable site whereon to erect a handsome and commodious building. The Government, as I have shown, cannot refuse us without ignoring many a wholesome precedent. We, on our parts (the Fellows of this Society, and of those now co-operating with us) may be counted upon to emulate the examples of the Royal Society of Literature and the Royal College of Physicians. A building fund will not be wanting, if only a proper site can be procured.

In conclusion, I ask that if my communication lacks something of the stern severity of statistics, it may be borne in mind that this is the first meeting of the Session, when it is usually permitted to the reader of a paper to be somewhat discursive.

Explanation of the Annexed Elevation and Plan.

Elevation.—This shows the Banqueting Hall (now the Chapel Royal, Whitehall), enlarged by the addition of a recessed centre, with lateral flights of steps meeting at a central entrance, and a new wing in all respects the counterpart of the existing building. The centre, lighted from above, would be well adapted to the display of delicate models and machinery, and the wings to larger and coarser objects. The back part of the centre might be arranged for offices and residence.

Plan.—The central line of the Horse Guards (A) is supposed to be continued through a broad footway, having the proposed Museum on its right, then a new building (Poor Law Board?) then the proposed new Chapel Royal, then additions to the private residences in Whitehall Gardens. Skirting the embankment on the left of the footway, are figured in order, Lord Carington's house and offices, the United Service Museum, and the site suggested for the "Scientific Societies' House."

On MECHANICS' INSTITUTIONS and the ELEMENTARY EDUCATION BILL.

By E. RENALS, ESQ.

[Read before Section F, British Association, at Liverpool, September, 1870.]

THE first Mechanics' Institution in this country was founded in 1823, and most of the institutions now in existence have been established more than a quarter of a century. I shall endeavour to show, that whilst they have been the means of effecting much good, the advantages derived from them have been mainly appropriated by the middle classes, and that they have not accomplished the purposes contemplated by those who promoted their organisation. They were established ostensibly to afford working men opportunities of improving their education, as well as continuing it through life; and if in the future they are to retain their position as educational institutions, the original idea which prompted their formation must be more closely adhered to.

With very few exceptions, it must be confessed that mechanics' institutions have failed to enlist the sympathy of working men, or to attract them in any considerable number to their class-rooms and lectures. The statistics which I have been able to collect, prove that the great bulk of the members are not composed of those persons who earn a livelihood by following handicraft trades. A few examples taken from the returns supplied to me establish this statement with regard to the principal institutions in the kingdom, beyond the possibility of doubt.

	Founded in	Members in 1870.	Working Men.
Derby Institution	1825	435	118
Glasgow „	'23	1,000	500
Huddersfield „	'40	1,430	900
Leeds „	'42	2,488	450
Nottingham „	'87	1,539	109
Stockport „	'84	774	184

It appears from the replies which were forwarded to me, that in many institutions there is no classification of the members, whilst

in others the classification is very imperfect, so that it is very difficult to arrive at the exact position which they occupy in relation to the working classes. The Huddersfield institution, in which nearly two-thirds of the members belong to the working classes, more nearly approximates to the ideal of their founders than any mechanics' institution with which I am acquainted.

Now, what are the causes of this failure so far as regards the operative classes? And how are they to be removed in prospect of the altered circumstances which a few years will bring about? The most prominent of these causes I believe to have been the inadequacy of our provision for securing proper elementary education to the rising generation. A second cause was the early age at which young persons were sent out to labour; and a third, the protracted hours of work in all trades and manufactures up to a recent period. These are a few of the more prominent causes, but those persons who are familiar with the subject will experience little difficulty in tracing out others to which this failure may in some degree be attributed.

The remedies which are suggested by individuals who have bestowed much thought on this question, should be carefully considered. In a year or two, elementary schools will be spread over the land, and one great hindrance to the usefulness of mechanics' institutions thereby removed. How, then, can these institutions be gradually made what they were intended to be—centres of education, in which youths and working men may follow the course of study which taste or interest marks out, and thus prepare themselves for discharging with greater efficiency the duties of their respective occupations?

1. I suggest that the science classes which are now so judiciously and so extensively encouraged by the Committee of Council on Education, should always be connected with mechanics' institutions, when the accommodation can be provided without inconvenience to the members. But I proceed a step further in this direction, and maintain that it would be to the permanent interest of all institutions to make some sacrifice, whether pecuniary or otherwise, to ensure this amalgamation of the science classes with their other operations. It is a great mistake on the part of those who have the management of these institutions, to allow a separate organisation to spring up in the locality for teaching the practical sciences, without making an effort to bring it into relationship with their own members; for, besides dividing and weakening the educational resources of the town or district, it very often happens that the more thoughtful and intelligent members join one or other of the science classes, and in the end separate themselves from the institution. Wherever a mechanics' institution has been established, it

should become the home of the science classes, and in this way enlist the sympathy and support of working men, who are becoming aware of the fact, that their social position must depend very much on the technical or scientific information which they bring to bear on their callings. When opportunities are placed before them of obtaining this technical knowledge through their connection with a mechanics' institution, they will not fail, after having received elementary instruction in the public schools, to devote their leisure hours to its acquisition.

2. Another suggestion which I venture to make is, that there should be a technical library in every institution. By this I mean that something more should be done than providing books which are of a merely rudimentary character. These are of course requisite, but the library should include advanced text books on the industrial pursuits of the district, and especially those works which describe the raw materials that enter largely into our different industries. There are many working men who purchase these books, and pay for them by monthly instalments, and it is only natural that they should not feel that deep interest in mechanics' institutions which they otherwise would if these books were found on the library shelves. When it is considered that untrained labour is being constantly superseded by mechanical contrivances, and that the number of workmen employed in superintending the machinery thus brought into use, is steadily on the increase, the necessity for technical libraries becomes more apparent. The beneficent action of mechanical science in raising the condition of working men and diminishing their physical toil, will become all the more palpable as elementary education prepares them for receiving the technical instruction to qualify them for the discharge of higher duties.

3. A third suggestion which I throw out is, that some means should be adopted by which young persons on leaving school to serve an apprenticeship or to acquire a knowledge of some trade, should be brought into connection with mechanics' institutions. This might be accomplished in various ways, but the one which seems to offer the greatest advantages both to the institution and to the individual is, free admission to a course of technical instruction bearing directly on the employments which they are following, conditionally on their becoming members of the institution. By an arrangement of this kind mechanics' institutions would become the centres of technical education for the industrial population.

4. There is a further suggestion which I would make, in relation to the managing bodies of mechanics' institutions. It is desirable, on many grounds, that working men should form a part of each committee, so that they might be able in some degree to mould the classes according to their own requirements. Some such regulation

as this is essential to the development of mechanics' institutions in the direction indicated in this paper.

The reasons which should prompt a ready acquiescence in the changes proposed, or in any others likely to place mechanics' institutions on a broader basis, are so obvious as scarcely to require mention. The demand for skilled labour is continually on the increase, whilst the call for untrained labour is on the decline, and of course the rate of remuneration varies with the every day requirements of industry. Now, on the large body of untrained labourers, mechanical improvements for economising labour press severely, because they render still more redundant the supply of labour which is already greater than the demand. This redundancy of untrained labour is one cause of the destitution which prevails in so many centres of industry, and is so fruitful a source of pauperism. With a system of elementary education established throughout the country, proportioned to the wants of the rising generation, there will be a steady increase in the number of persons who will be in a position to receive technical training and instruction; and in proportion as mechanics' institutions meet this advance in the social elevation of the working classes, they will fulfil the anticipations of the earnest men who so unselfishly contributed to their formation.

It must not be overlooked, that as we are a largely producing and exporting nation, this increase of skilled labour is absolutely needed to place our manufacturing industry and commercial enterprise on a satisfactory and permanent basis. We can only secure employment for the population of this country by improving and elevating the capacity of the producing classes; and it is because we have not borne this circumstance sufficiently in mind, that we are brought face to face with the alarming fact that our resources are so largely taxed to contribute to the maintenance of unskilled labour. In bringing about this desirable change, mechanics' institutions should take a prominent position by preparing to widen the circle of scientific training and instruction.

On the APTITUDE of NORTH AMERICAN INDIANS for AGRICULTURE.

By JAMES HEYWOOD, M.A., F.R.S.

[Read before Section F, British Association, at Liverpool, September, 1870.]

INDIAN reservations in Canada are under the control of the Secretary of State at Ottawa; the Hon. Joseph Howe holds this office at the present time, and is Superintendent-General of Indian Affairs.

Mr. W. Spragge, Deputy-Superintendent of Indian Affairs, presents annually to the Secretary of State a report on the Canadian settlements of Indians.

The Six Nations Indians in the Tuscarora reserve, near Brantford, on Grand River, in the province of Ontario, form the most important settlement of aborigines in Canada. Their reservation comprises 55,000 acres, surrounded on all sides by thriving communities of white settlers. The Indian population of this reserve amounts to about 3,000 persons, including 2,800 of the Six Nations, and about 200 of the Mississaguas, or Ojibbeways, located near the river New Credit, at the southern extremity of the Tuscarora reserve.

According to a report of Commissioners, appointed by Sir Edmund Head, Governor-General of Canada, in 1856, the Six Nations Indians were settled in the Tuscarora reserve, by Mr. Thorburn, the Commissioner, in "farm lots, averaging 100 acres each by actual survey."

The total clearing of the Tuscarora reserve "amounted in 1856, to 7,348 acres, more than half of which had been done by the Indians themselves, the remainder having been chopped by squatters, who had been removed from the land."

"Most of these squatters were compensated for their improvements to the amount of more than 8,000*l.*, paid from the funds of the Six Nations Indians."

The Commissioners of 1856 report that the Six Nations Indians cultivate on their reserve "separate farms, and each is secure in his possession from the intrusion of other Indians on the lot he occupies. His heirs inherit his improvements, but the soil belongs to the Six Nations in common. The Indian has no right of transferring his portion of land to another."

"The revenue of the Six Nations Indians amounts to 39,489 dollars annually.*

* "Canadian Commissioners' Report," 1856, p. 38.

"It is derived from the invested proceeds of their land sales. They are also proprietors of 6,121 shares, of 25 dollars each, Grand River Navigation Company Stock, for which the Government, acting as their trustees, paid 153,025 dollars, or 38,256l. 5s. 5d.

"This investment is quite unproductive, and the Indians complain of the hardship of so much of their money being alienated, without their consent, in an unproductive speculation.

"The Six Nations Indians also hold 2,400 dollars, or 600l. Stock, in Cayuga Bridge, from which they receive no interest. They possess, in addition, a few shares of Bank Stock, and they are further entitled to the proceeds of 30,856 dollars, which arise from mortgages given by different parties."

A more detailed account of the finances of the Six Nations Indians is given by Mr. Spragge in his report on the Superintendency of the Grand River Indians for the year ending the 30th June, 1868, which contains the following items:—

SIX NATIONS OF THE GRAND RIVER.

Receipts.

	Dollars.	Cents.
Land, timber, &c.	4,423	46
Interest on investments	46,511	41

Disbursements.

By warrant.....	45,680	21
„ transfers	436	50

Credit Balances.

1st July, 1867	798,288	98
30th June, '68	803,107	14

At the rate of 4s. for a dollar, the credit balance of the Six Nations Indians, on the 30th of June, 1868, would amount to 160,000l.

The expenditure for the Grand River superintendency for the year ending the 30th June, 1868, comprises:—

	Dollars.	Cents.
I. Paid from the Fund of the Six Nations of the Credit—		
Pensioners	250	—
Allowance for the celebration of Her Majesty's birthday	131	—
II. Paid from the Fund of the Six Nations of the Grand River—		
Losses by fire	476	50
J. T. Gilkison's contingencies	321	27
Advertising	33	76
Law expenses	22	97
Distribution	39,271	51
Assistance to sick Indians, and medicines	98	70
Chief, board bill attending councils	400	—
Insurance	12	50
Travelling expenses of three sick Indians	55	—

	Dollars.	Cents.
III.— <i>Paid from the Fund of the Mississaguas of the Credit—</i>		
Pensioners	150	—
J. T. Gilkison's contingencies	45	40
Insurance upon saw mill	27	50
Distribution	4,203	64
Postage	3	93
Sundry bills approved by the tribe in council, and allowed by the Superintendent-General	150	73

In the Grand River Indian Superintendency the following officers are connected with the bands of Indians of that reservation:—

	Dollars.	Cents.
1. <i>For the Whole Settlement—</i>		
J. T. Gilkison, vice-president and commissioner, appointed by the Superintendent-General of Indian Affairs; salary	1,400	—
Henry Andrews, clerk, appointed by the Governor-General of Canada; salary	800	—
2. <i>Six Nations Indians—</i>		
Medical attendant, R. H. Dee, M.D., nominated by the band of Indians, and approved by the Indian Department; salary	1,500	—
Medical attendant, W. M. Cargo, M.D., nominated by the band, and approved by the department; salary	280	—
G. H. M. Johnson, interpreter, nominated by the band, and approved by the department; salary	400	—
James McLean, warden, nominated by the band, and approved by the department; salary	200	—
David Hill, caretaker, nominated by the band, and approved by the department; salary	20	—
3. <i>Mississaguas of the (River) Credit—</i>		
David Sawyer, chief and agent, nominated by the band, and approved by the department; salary	200	—
Moses Padaguong, sexton, nominated by the band, and approved by the department; salary	25	—
Thomas Pyne, M.D., medical attendant, nominated by the band, and approved by the department; salary	200	—
Elijah McDougall, teacher, nominated by the band, and approved by the department; salary	250	—
Francis Wilson, teacher, nominated by the band, and approved by the department; salary	259	72
James McLean, warden, nominated by the band, and approved by the department; salary	100	—

Besides the two Schools in the New Credit district, maintained by the Indian bands of that locality, there are in the portion of the Tuscarora reserve inhabited by the Six Nations, eight schools, principally supported by the New England Company, a London corporation, formed under the Commonwealth, whose funds are devoted to the extension of civilisation and Christianity among the aborigines in British colonies, and especially in Canada.

Mr. Henry Lister, a member of the New England Company, visited the Tuscarora reserve in 1868, and reported of the Six

Nations Indians that their chief crops were "wheat, Indian corn, "oats, and hay."

Most of the Indian houses in this reserve, Mr. Lister described as "cottages of one or two rooms, built of boards or logs, and "usually heated by a stove."

"There is not a single village," Mr. Lister remarks, "on the "reserve; each house stands in its own lot of about 50 acres."

An agricultural society was formed in 1868, among the Six Nations Indians of the Grand River, at an annual subscription of one dollar (about 4s.), for each member, and their first show was held on the 15th of October, 1868, on a farm within the reserve.

The judges awarded prizes as follows, the exhibitors being all Indians.

Prizes:—Two for farm horses; two for ponies; two for saddle horses; two for gig horses; two for brood mares; two for three-year-old horses; two for two-year-old colts.

For cattle, two prizes were awarded for yokes of oxen; one for the best two-year-old steer; one for the best two-year-old bull; one prize for the best one-year-old bull. Similarly, for cows, two prizes were given for cows of any breed; one for the best two-year-old heifer; one prize for the best one-year-old heifer, and one for the best spring calf.

Under the head of sheep, two prizes were given for rams, and two prizes for ewes.

The prizes for grain, &c., are thus described in the judges' report:—

Grain.

- Best spring wheat ("Tee" variety), Levi Jonathan; 2nd, Squire Hill.
- " wheat (Fyfe variety), Richard Hill; 2nd, Jacob Jamieson.
- " " (Johnson variety), James Jamieson.
- " barley, Isaac Powless; 2nd, W. Smith.
- " peas, Henry Staats, Sr.
- " oats, Richard Hill; 2nd, Jacob Jamieson.
- " buckwheat, Joseph Powless.

Roots.

- Best corn (white), James Jamieson; 2nd, Levi Jonathan.
- " " (yellow), James Givens; 2nd, Henry Staats, Sr.
- " potatoes, Jacob Jamieson; 2nd, Joab Martin.
- " onions (English multipliers), Isaac Powless; 2nd, Isaac Powless.
- " " (black seed), Isaac Powless; 2nd, Isaac Powless.

Fowls.

- Best pair of geese, Jacob Davis.
- " Dannick fowls, James Jamieson.
- " Spanish " "

Swine.

- Best breeding sow, Isaac Barefoot.
- " pair of young Berkshires, Albert Jamieson.

Dairy.

Best butter, Mrs. William Smith; 2nd, Mrs. Jacob Davis.

Domestic Manufactures, &c.

Best bread, Joab Martin; 2nd, Mrs. Joseph Powless.

„ beadwork, Mrs. Albert Jamieson.

„ buckskin, James Jamieson.

„ axe handles, James Hill Waneas; 2nd, James Hill Waneas.

ISAAC DUNCAN, *President.*

SHONAGABOWANE, *Sec. pro tem.*

A correspondent of the "Brantford Courier" mentions that on the day of the show he overtook a neatly-dressed young Indian woman, carrying a pretty black-eyed baby, and walking briskly along towards the agricultural exhibition. "Our show," she said, with a spice of laudable pride in her voice.

Mr. Gilkison, the visiting superintendent of the Six Nations Indians, attended the exhibition, and expressed himself highly gratified.

On the 27th of April, 1869, a grant of 20*l.* was made by the Special Committee of the New England Company, for the Indian Agricultural Society in the Grand River reserve.

A similar grant of 20*l.* to the Indian Agricultural Society has also been made in 1870, by the New England Company.

The policy hitherto pursued in Canada, with regard to Indians, has been to induce them by means of small annuities to remain, to a great extent, as residents in the Indian reservations of the Dominion to which their lands or settlements may respectively belong.

According to the Rev. Edward R. Roberts, missionary to the New England Company at Chemong, near Peterborough, in Canada, the province of Ontario was "divided into districts, with reference to the Indians."

"The land of each district was valued at a certain rate per acre, and the interest of the aggregate sum was paid half-yearly to the Indians included in that district, which constituted their annuity. And, in addition, each band of Indians had a reserve of land in a particular locality for their settlement.

"The aggregate annuity of the several bands," Mr. Roberts observes, "remains the same, whatever changes by death, birth, or emigration, may take place. If a band of Indians becomes less in number, those who remain receive proportionably more annuity.

"While, however, an individual Indian (or family) ceases to receive his annuity from the fund appropriated to the band he leaves, he may be received into another band, by application, and a vote of the people; but as such an accession to their numbers

“diminishes their individual annuity by allowing others to share it,
“an application of this sort is seldom acceded to, as might be
“expected.

“It sometimes occurs that an Indian, from some private reason,
“wishes to leave one band and to unite with another, but the diffi-
“culty just referred to stands in his way.”

Free grants of land to settlers in various parts of the province of Ontario are now found to interfere with some of the arrangements entered into for Indian annuities; and in June, 1869, the chiefs of the Ojibbeway Indians met at Garden River, near Lake Superior, and drew up the following memorial to the Governor-General of Canada, setting forth, for his Excellency's consideration, that lands freely granted to settlers will produce no funds whereby the Indian annuities can be augmented, according to the promise of the Canadian Government to the Ojibbeway Indians in the treaty of cession in 1850.

“To his Excellency the Right Honourable Sir John Young,
“Bart., K.C.B., Governor-General of the Dominion of Canada,
“&c.

“The Memorial of the Ojibbeway Indians.

“Great Chief,

“Your memorialists most respectfully present and pray:—

“1. That in or about the year A.D. 1850, they ceded to Her
“Majesty's Government the whole of the vast extent of country
“bordering on the northern shores of Lakes Huron and Superior.

“2 That the treaty of cession provided, that should the territory
“so ceded at any future period produce such a sum as will enable
“the Government, without incurring a loss, to increase the annuity
“which has been already secured to them, the same to be augmented
“from time to time, provided that the amount paid to each indi-
“vidual shall not exceed 1*l.* currency in any one year.

“3. That under the system of free grants of lands to actual
“settlers, the territory so ceded will produce no funds whereby the
“said annuity should be augmented from time to time according to
“promise made; and as your memorialists feel that they have a
“claim upon the Government, in consequence of the promise made,
“they therefore humbly offer to Her Majesty's Government the
“surrender of their reversionary interests, and would execute a
“deed of surrender upon receiving reasonable compensation.

“4. That under the treaty of cession, the right of fishing was
“reserved by your memorialists, and which is now withheld.

“Your memorialists therefore humbly pray your Excellency's
“protection for the maintenance of that right, which forms part of
“their support.

“ That the said treaty also provided, that the number of Indians
 “ entitled to the benefit of the treaty shall amount to two-thirds of
 “ the present number. And should they not at any future period
 “ amount to two-thirds of their present number, then the said
 “ annuity shall be diminished in proportion to their actual num-
 “ bers. If the diminution of annuity herein referred to means the
 “ perpetual annuity, your memorialists humbly pray your kind
 “ interposition, and cause and order for the waiver of the diminution
 “ of annuity, and that the original amount should be paid to the
 “ descendants of your memorialists, and their respective bands for
 “ ever.

“ Great Chief,—Always unhesitatingly loyal to your Excellency,
 “ your memorialists venture to claim your favourable consideration
 “ in this their expectation, and as in duty bound your memorialists
 “ will ever pray.

(Signed)

“ CHIEF SHINGWANKOONEE.

“ OJEEHANGOOME.

“ NEBUHNAGOOJINY.

“ WAHBENANMA.

“ PUHQURADGENENE.

“ AUGESTA.

“ AHNUEHWAGOONS.

“ WAGEMAHKA.

“ AHSUHWAHSGA.

“ SOLOMON JAMES.

“ WRAHKANDAKETHIK.

“ PACAHMEGAHBOW.

“ PABALIMANEDUNOG.

“ WILLIAM WAWENOSH,

“ JOSEPH WAWENOSH,

“ WILLIAM FISHER,

“ JOHN CANNARD,

“ Witnesses from Sarnia and Walpole Island.

“ Dated at Garden River, this 12th day of June, 1869.”

The distribution of annuities to the Six Nations Indians, near Grand River, amounted in the year, June, 1867, to June, 1868, to 39,271 dollars; and the distribution to their neighbours, the Mississaguas, to 4,203 dollars; total 43,474 dollars, or about 8,695*l*. sterling.

On the 30th June, 1868, the credit balance of the Six Nations Indians amounted to about 160,000*l*., so that an ample fund, with regard to the Six Nations, exists for assisting that settlement of Indians in their agricultural improvement.

STATISTICAL RESULTS of the CONTAGIOUS DISEASES ACTS. By
BERKELEY HILL, M.B. LOND., F.R.C.S., *Assistant Surgeon to
University College Hospital, and Surgeon for Out-Patients to the
Lock Hospital.*

[Read before Section F, British Association, at Liverpool, September, 1870.]

THE prevention of contagious venereal disease, when examined by statistics, has two main points of inquiry. First, the extent to which these diseases reach; second, the amount of control that sanitary regulations can exert over their propagation.

There are three distinct disorders included in the term venereal disease:—

1. The most frequent is gonorrhœa; this though often a trifling ailment, is very frequently a cause of much suffering, and in women of sterility; in men, through producing stricture, it may entail organic disease that, in many cases, besides crippling the individual, sooner or later destroys him. I am the more disposed to dwell a moment on the gravity of gonorrhœa, because the Medical Officer of the Privy Council, in the section of his eleventh report devoted to the question of extending the Contagious Diseases Acts, has stated that this disease "is never even temporarily of much importance to women, nor ever, unless very exceptionally, of much permanent importance to men." Now, I have no hesitation in saying this is not the opinion held by the majority of surgeons and physicians with regard to the gravity of gonorrhœa. In order to test this statement, I applied to a large number of the leading physicians and surgeons in London and the provinces, and obtained strong expressions of dissent from the opinion of the Medical Officer of the Privy Council. For example, Mr. Prescott Hewett, surgeon to St. George's Hospital, states that rheumatic disease of joints is a common consequence of gonorrhœa, and that he knows of three cases of pyæmia (putrid infection of the blood) due to gonorrhœa, of which one died and another escaped, but with rigidity of the hip.

But without detaining you with such quotations, perhaps a short statistic of the patients under my care at the Lock Hospital will best show the proportion of severe to mild cases of gonorrhœa.

In the year 1869, 1,289 male patients came under my care for gonorrhœa; in 595 the disease was the simply inconvenient disorder to which it is urged this contagion can alone give rise; in 395 it

produced severe pains, and more or less disablement for several weeks; 239 were cases of long duration, all of which had caused much suffering and loss; in 60 the malady had given rise to stricture, an affection that not seldom in the end destroys the patient.

2. The next disease of the group is that which concerns us most nearly. Syphilis, the malady in question, is one of the gravest of human diseases, which, no doubt you are aware, by its tedious course keeps its victims long disabled, by its tendency to attack organs essential to life, causes death; and by the faculty of passing from parent to offspring, influences most materially, even when the patient survives, the development of the individual attacked.

3. The last form is the local contagious sore, which very rarely endangers life or permanently injures the sufferer, and only gains importance through the difficulty of distinguishing it from those other sores which are connected with true syphilis. For this reason all contagious ulcers are termed *Primary Syphilis* in the official reports, consequently under this head both the first manifestation of the constitutional disease and the purely local sore are included, a classification that must be borne in mind when estimating the effect of the Acts in reducing the extent of true syphilis.

Any attempt to estimate the extent of loss from these three venereal diseases, or even their mortality among the civil population, is extremely difficult, and an exact one impossible. Because, in the first place, the knowledge that any form of visceral disease is the consequence of syphilis, is a comparatively modern discovery. In the next place, our most accurate pathologists are still increasing the proportion of those oft-occurring forms of brain disease, liver disease, heart and lung disease, and kidney disease, which is set in action by syphilitic infection. It is thus indubitable that much mortality and much disabling sickness due to syphilis are not so registered, but are still attributed to other causes. Whence it follows that as this more accurate pathology becomes the current knowledge of the medical profession, the number of deaths assigned to syphilis rapidly increases; for the proportion of deaths ascribed to syphilis in the ten years 1857-66 has risen from 50 per million of population to 75 per million.

Nevertheless, while improved diagnosis has increased the registered number of deaths from syphilis, it is fair to believe that the actual proportion of mortality has also augmented, because the propagation of syphilis through increased facilities of communication is more widely spread throughout the population.

But if it can be proved that the extent of venereal diseases is very wide, and that they inflict great damage, it follows that their prevention is worth attempting, without waiting for an exact

measure of the loss they cause, and there would remain only the necessary precaution that this attempt do not induce worse evil.

In the first report of the Committee of the Harveian Society "On the Prevalence of Venereal Disease," 1867, was published a mass of information collected by that committee from hospitals and charitable institutions, which showed that the amount of venereal disease is very great; most of this was reprinted in the first report of the Association for Extending the Contagious Diseases Acts. Thus at Guy's Hospital, according to the resident medical officer, 25,800 venereal cases are annually treated in that institution, being 43 per cent. of the total number of out-patients. At the Hospital for Diseases of the Skin, 1 in 10 of the patients applies for relief from syphilitic disease. One of the surgeons of the Royal Ophthalmic Hospital, Moorfields (at which institution 20,000 applicants are attended annually), states that 1 in 5 of his patients have syphilitic disease of the eye. At the Throat Hospital, of 626 patients, taken in the order of their application, 93, or 15 per cent., had syphilitic disease of the throat.

In the appendix to the eleventh report of the Medical Officer of the Privy Council, there is a statistical summary of the number of venereal patients seen at a few general hospitals and dispensaries of the metropolis, during periods varying from one day to one week, with the object of ascertaining the proportion of venereal to other kinds of sickness treated gratuitously in London.

At the charitable institutions visited, 10,229 persons of all ages were seen, of these 902 had some kind of venereal disease, and of these again 467 had true syphilis, 39 being children with inherited disease, and 251, or 53 per cent., of the syphilitic patients being adult males.

In attempting to estimate the number of venereal patients of the metropolis, the Medical Officer considers that during their few days' investigation, one-fourth of the sick who applied for relief at the charitable institutions of London in that period came under the observation of his deputies; but as no account was taken of Guy's Hospital, nor of the Dreadnought Hospital, nor of the male out-patients of the Lock Hospital, it would seem that the estimate that one-fourth of the venereal patients of London were seen, is calculated on insufficient data. Again, when endeavouring to get at the total number of cases of sickness annually relieved by the charitable institutions, the reporter to the Privy Council is obliged to acknowledge "that in many instances no returns are kept, in others, there is no attempt at accuracy, while at many institutions there is a tendency to greatly overstate the amount of work done." For these reasons I think we must accept with much reserve the estimates drawn up by the Medical Officer of the Privy Council from

the data he collected, namely, that only about 7 per cent. of the sick poor are suffering from venereal disease of any kind, and only about $3\frac{1}{2}$ per cent from true syphilis.

But let us admit, for the sake of argument, that only $3\frac{1}{2}$ per cent. of the total sickness of the metropolis is in the form of true syphilis; then taking the calculation of the Medical Officer to the Privy Council, that 1,500,000 persons are annually treated gratuitously in the metropolis, we have 52,500 persons yearly suffering from a disease that, unlike other diseases, maintains its contagious condition for months, and, in some instances, for years in the sufferer. Moreover, as 53 per cent. of the syphilitic patients seen were adult males, we get 28,000 of the male working population of London alone in every year more or less hindered from earning their bread by syphilis.

These calculations do not include that portion of the venereal sick which is either treated by regular practitioners, by druggists, or by quacks, or which has no treatment at all—a very numerous class. Though until completely disabled, venereal patients do not usually receive treatment from poor law medical officers, those who ultimately come to burden the ratepayers are by no means an insignificant number. In the three years 1862-64, 855 venereal patients were treated in the workhouses of the three contiguous towns of Plymouth, Devonport and Stonehouse. Also, the Medical Officer of the Privy Council tells us that of the sick inmates of St. Pancras and Lambeth workhouse infirmaries, *i.e.*, of those supported by the poor's rate for actual sickness, 10 per cent. were there with venereal disease. I may here remark, that, possibly astonished by the large proportion of venereal disease to the total of actual sickness in the two workhouses examined, the reporter for the Medical Officer of the Privy Council estimates the percentage of venereal sick not on the number of sick inmates, but on the total population of those workhouses. This does not give a correct indication of the ratio of venereal to other kinds of disease in our workhouses, a ratio that is doubtless far higher in towns than in country districts. One other fact, that indicates the extent to which venereal disease prevails among the young adult population, is, namely, that 16 per 1,000 of those who offer themselves as recruits for the army have true syphilis, while 38 out of every 1,000 of the rejected have syphilis. (See Table No. XII.)

As an instructive comparison of the extent of venereal among the sick poor of Paris and London, I will mention the following. In a letter from Dr. Lefort, surgeon to the Midi Venereal Hospital of Paris, published in the "*Lancet*" of 28th May, 1870, it is stated that in 1866 there were 325,287 persons seen as in- and out-patients at the general hospitals alone, for all kinds of sickness.

Of these, 10,842 suffered from venereal affections, or 3·3 per cent. Now, the observers employed by the Medical Officer to the Privy Council saw, in the general hospitals they selected as fair standards of the condition of the sick poor of London, 10,229 persons, of whom 902 were venereal, or 8·8 per cent. I exclude in both cases the patients seen at the special venereal hospitals, and I also exclude the estimate for that portion of the sick poor who are treated by the poor law medical officers who, as a rule, do not relieve venereal disease. The Medical Officer of the Privy Council says the poor law relieves as out-patients about one-fourth as many as the number relieved by the charitable institutions; hence the 8·8 per cent., may be reduced to $6\frac{1}{2}$ per cent. or just double the amount seen in Paris. I have already contended that the Medical Officer of the Privy Council has greatly underestimated the amount of venereal disease in the London sick poor. Yet even his data, so far as this comparison is trustworthy, would show venereal disease to be double as common in London as in Paris.

The navy and army are the only fields for exact observation that we at present possess, or probably shall possess for some time to come. In the statistical reports of those forces, we have records of the loss occasioned by these diseases (called the "enthetic group") for several years.

In the accompanying table (see Appendix No. I) the ratio of admission to hospital, and the consequent loss in time, have been inserted so far as the published returns of the Army Medical Department furnish them. An inspection of this shows that the loss from venereal disease, from some unknown cause, steadily diminished before sanitary regulations were set in force. Consequently the *whole* diminution of venereal sickness in the districts under the Acts, has been attributed by some to this unknown influence, and none to the operation of those Acts. This conclusion, I venture to maintain, is incorrect, and I would prove it by showing that the gradual diminution from the year 1860 to 1865 has not continued to the present time, but has been replaced by an increase that is plainly seen at those stations where the Acts are not in force.

On p. 88 of the "Report of the Select Committee of the House of Commons on the Contagious Diseases Acts," 8th July, 1869, is a table by Dr. Balfour of the ratios of the admissions to hospital for venereal disease during the nine years 1860-68, at twenty-four military stations of the United Kingdom. I am, however, given to understand by Dr. Balfour himself, to whose kindness I am continually indebted, that the figures of this table are not absolutely trustworthy, inasmuch as some entries commonly classed as venereal, may not in all cases be due to that cause. But as this source of

error has been in operation throughout the nine years, it probably affects all the ratios alike, consequently, so long as these years are compared only with each other, the discrepancies will not affect the argument. Now, if we add together the ratios of the nine years for the same station, and divide it by nine, we shall get a quotient that may be taken to represent the usual annual ratio for that station during the nine years. Another disturbing cause renders this quotient not absolutely correct, namely, the fact that the ratio of the station for each year is calculated on the mean strength at that station in that year, and I have no way of ascertaining those mean strengths. Nevertheless, practically, my quotient will serve to represent the usual annual ratio for each station during the nine years in question, because the number of troops quartered at these stations has not materially varied. With these limitations, I venture to put forward the following deduction. Twenty-four stations are included in the table: at seventeen of them the Act did not operate in 1866-68; at two, Shorncliffe and Windsor, the Act was set in operation only in 1868, thus we may conclude the returns from these stations were practically uninfluenced by the operation of the Act in that year. Then, if the ratios of the years 1867-68 are compared with their usual ratio, we find that at twelve of the nineteen stations, the usual proportion was exceeded in 1867-68; at two others it was attained, although not surpassed; at the other five the ratios in 1867 and 1868, though below the usual rate, were very considerably above the minimum year in all but one station, Edinburgh (see Appendix, Table No. II).

Again, by looking at Table No. III, which gives the ratios of the entries for primary sore and gonorrhœa from 1864 to 1869, you will see the usual ratio, the most important form, in the unprotected stations fell slowly to 1866, but from that year has risen to its old ratio of 111. From these facts it is plain that the proportion of admissions to hospital for venereal disease in the army at home is not gradually diminishing where the Acts are not carried out, but that there the old level is certainly kept, if it does not rise.

Next, if the entries at the five stations where the Act was put early in force are examined, we find a marked and great decrease in the ratio. Starting with an entry for venereal sore, similar to that in the unprotected stations, namely, 100, it has fallen in 1867 to 86; in 1868 to 70; and in 1869 to only 59. Table No. IV, shows the variations of the entries in 1869 for primary sore and gonorrhœa from those of previous years. The decrease at the protected stations is very marked.

The number of men of the British army constantly off duty per 1,000 from contagious disease, was in 1864 19 (the average during the years 1860-67 being 20·43, see No. I of Appendix), but taking

the quarterly police returns for the data of the calculation (the "Army Medical Report" for 1869 being not yet published), only 12·6 per 1,000 of the effective military force stationed in the protected districts were so disabled. In Table No. V the percentage for both seamen and soldiers is set down at 11·06, but the foregoing calculation refers only to the military forces.

This amelioration is very great, and most satisfactory for those who believe in the efficacy of sanitary restrictions; but the information that we can glean of the condition of foreign armies, shows that the loss from this cause is far less than it is in our own. The French army has 11 men per 1,000 of those actually present in garrison kept from duty, and the whole loss estimated on that force is only four days, or about half what used to be the loss in our own army.

According to an official return from the Belgian War Office, in the Belgian army the average annual loss from this cause has, during the six years 1863-68, equalled 2·96 days of each effective soldier's services. In the British home army, from 1860-67 it equalled 7·44 days.

Let us pass from the general effect on the troops stationed within the protected districts, to the effect at particular stations, it appears from a return (furnished to me by Dr. Gordon, principal medical officer of the district), of the entries for primary sore and gonorrhoea at the military hospitals at Portsmouth, during the seven years 1863-69, that the annual ratio of the first six years for these two diseases, was over 254 per 1,000, whereas in 1869, the last year of the statistic, it was 178. And on the authority of the same gentleman, it is stated that in a single week of May, 1870, the 12,666 men of the navy and army at Portsmouth sent only 17 fresh cases of venereal to hospital; in the corresponding week prior to the introduction of the Acts the number was 60.

Another excellent illustration of the advantage of the Acts has been given by Mr. W. Lane, assistant-surgeon Grenadier Guards, in the "Lancet" for 8th May, 1870. On the 1st March, 1869, the battalion to which he is attached left London for Windsor, and, the Act being in force in that town, the men were examined on their arrival, those found diseased being sent to hospital. After this, the admissions of venereal for the first four months were only 30; nearly all the cases were of a mild form and readily amenable to simple treatment. On the 1st September the battalion returned to town, and was quartered at Chelsea Barracks, the number under treatment then was only 7. From that date venereal rapidly increased, and during the succeeding four months as many as 108 cases were admitted into hospital, or more than three and a-half times the number admitted at Windsor.

The latest statistical report yet published on the health of the navy, is that for 1867, and therefore we have no means of learning to what extent this force has benefited by the Acts at the present time, beyond the single fact that whereas before their introduction the admissions for venereal sore were 104 per 1,000 mean strength, they are now 52. But I have also collected the following from the official blue books. Between 1861 and 1865, both years inclusive, the average annual strength of the crews afloat on the home station was 21,420 men, and the average annual number of days' sickness from venereal was 99,658. (See Table No. VI.) On 3rd December, 1864, the Contagious Diseases Prevention Act of 1864 was set in force at Portsmouth, and in April, 1865, at Devonport. Though so inadequate that it was replaced by the stringent Act of 1866, it was not devoid of effect on the health of the seamen, for in 1866 the number of days' sickness from venereal fell to 76,429, and in 1867 to 72,132,—the strength of the crews being rather higher than before. Anxious to see if the saving in money that attended this saving in health could be expressed, I turned to the Appendix to the "Report of the Committee of Surgeons on Venereal Disease in the Army and Navy, 1865," p. 2, where an official return states that the cost of venereal among the seamen and marines afloat in 1862 was 32,000*l.* This estimate gives an expenditure per man for wages of 32*l.*, for victuals of 19*l.*, and for hospital expenses of 2*l.* 10*s.*, or a total of 80*l.* 10*s.* per man. According to these data, the cost of venereal among the crews afloat, from 1861-65, averaged 21,867*l.* a-year, while in 1866 it fell to 16,840*l.*, and in 1867 to 15,898*l.*

This process applied to the saving in the military strength is also reassuring. If we take Sir Alexander Tulloch's estimate of the annual cost of a private soldier, namely 100*l.*, we shall find a considerable saving to set off against the expense of the Acts, even at this early stage of their operations. At the nine stations where the Acts were in operation in 1869, 29,437 men were the mean strength of that year. This, at the rate of 19:10 per 1,000 constantly off duty in 1864, gives a total of 562 men rendered useless by venereal. But, as calculated from the quarterly police returns, 12.61 per 1,000, or 371 men were so diseased, and 191 men were consequently kept on duty at a money saving of 19,100*l.*

[During the discussion which followed this paper, it was objected that the saving was outweighed by the outlay necessary for carrying out the Acts; some 30,000*l.* or 40,000*l.* being voted by Parliament for this purpose. But the objector forgot that this sum included a large portion for building hospitals and other similar purposes. Hence this annual saving becomes a very handsome return for the outlay of capital.]

There is one point respecting the diminution of syphilis for

which I must ask a minute's indulgence before passing to the last portion of the paper. This is to put before you such evidence as we possess concerning the reduction of true syphilis by the Contagious Diseases Acts. I admit that this cannot yet be shown by as conclusive a set of figures as those by which the diminution in the primary venereal sore can be proved. But I would remark that as a venereal sore, almost without exception, begins the course of constitutional syphilis, the diminution by one-half of those sores must imply a diminution in the proportion of those cases which belong to the constitutional or true syphilis. Corroborative of this view is Table No. VII, given me by Dr. Gordon, the principal medical officer of the garrison at Portsmouth, which shows that the entries for venereal sore and for true syphilis were one-third less in the last quarter of 1869 than they were in the corresponding quarter of 1868. Another, No. VIII, also shows that there has been diminution at the Royal Naval Hospital, Plymouth.

To these may be added the testimony from the records of the effect of the Acts on the health of the women subjected to them, which has been quite as remarkable as that on the health of the men, but which time will not permit me to describe at length. In Table No. IX I have arranged the proportion of local disease and constitutional disease in the patients treated in the Devonport Lock Hospital. But it must be borne in mind that only since Midsummer, 1868, has the accommodation in hospital been sufficient to receive ALL the women who might be found diseased. Consequently that is the first period at which *all* the prostitutes were subjected to periodical examination, and all the cases of disease secluded from contagion. I may also mention that during the six successive half years of the operation of the Act of 1866 at the Royal Albert Hospital, Devonport, the Lock Hospital for that district, the average length of stay in hospital for the cases of true syphilis, fell from 125 to 66 days. This may be offered as a proof that the Act has greatly diminished the severity of true syphilis.

I will add three other facts, to show the effect of the Acts in reducing venereal disease, especially as these show the effect on the civil population rather than on the military or naval forces. The number of women found diseased at the periodical examinations of *all* the prostitutes at Devonport was, when those were instituted, 33 per cent. They form at the present only 15 per cent. During the three years immediately preceding the Acts, 149 venereal males and 706 venereal females were admitted into the workhouses of Plymouth, Devonport, and Stonehouse. During the three years of the operation of those Acts, there were 55 males and 167 females admitted. (See Table No. X.) The diminution of the females sent to the workhouse, is doubtless due to the increased hospital accom-

modation, but the diminution in the males cannot be so explained, for no increase in the hospital accommodation for them has taken place. So again, the percentage of venereal cases among the prisoners of the Devonport borough gaol from 1851 to the end of 1864, was 4·06; the percentage from 1864 to the 31st March, 1870, being 1·89.

The effect of the Acts on the moral and social condition of the women subjected to them. Without delaying you longer, a few statistics on this point may serve to show that the Acts have been as signally successful in ameliorating the moral condition of these unhappy persons, as they have been in improving their health.

No one who has made himself in any way familiar with the real position of the unfortunate creatures who are subjected to the operation of the Acts, can think of their forlorn and miserable state without grief. Two and a-half years ago I undertook, besides researches in the localities of London, inhabited by the abandoned women of the metropolis, an investigation in the districts under the Acts. In these inquiries, I was witness to many horrors that it is needless to recount, the more so as lately far more graphic pens than mine, notably those of Mr. James Greenwood and Mr. Acton, have given most vivid and correct pictures of the hardships and degradation of this class.

The most remarkable diminution in *numbers* has taken place, almost without exception, wherever the Acts are put in force. The Tables Nos. XIII and XV illustrate this most incontestably. The number of 2,020 ascertained to have been residing in the Devonport district in December, 1864, had dwindled to 564 in September, 1870.

In the "Hampshire Telegraph" it is stated, on the authority of Mrs. Colebrooke, matron of the Portsmouth Home, "that 374 young women have either been reclaimed or sent to their homes; that women are properly treated at the hospital, and the religious instruction afforded is readily received." Also that since the commencement of 1869, of 1,114 prostitutes living in Portsmouth during that year, 161 have left the district, 94 are now living with their friends, 43 have married, 30 have entered the home, 10 are in service, 24 in the workhouse, 12 have died, 10 have returned to their husbands, leaving 730 prostitutes still in the town, or 384 less than last year.

To show the good influence of the Acts at all the stations where they have been enforced, let me quote from Dr. Lyon Playfair's admirable speech in the House of Commons during the debate of the 24th of May, 1870, in which he gives the aggregate result of the Act for all the protected stations. (See Table XV.) "Since they were brought under the operation of the Acts, 7,766 common women

"have been registered, of whom now only 3,016, or less than half, remain. Hence 4,750 no longer practise their vocations in these towns. What has become of the remainder? 107 have died, 385 have married, 451 have entered refuges, and 1,249 have been restored to their friends. In short, 27 per cent. are known to have returned to a respectable life. Then, 2,558, or 32 per cent., have left the stations; many, doubtless, to pursue their miserable career elsewhere, but many also, as the police believe, and as in charity we are bound to hope, to return to their own homes."

This statistic has been met by simple denial, and by the assertion that the prostitutes under the present system practise their trade clandestinely, instead of openly as before. But this allegation is utterly opposed to all evidence. It is notorious that the young women, who recruit the ranks of prostitutes,—those who frequent dancing saloons, singing halls, and the like,—have ceased to do so to a very large extent, and are thus removed from dangers to which they were exposed. Again, the class of clandestine prostitutes has an intimate and constant relation with the open prostitute class, and she who begins in the first soon merges into the second. Still more, a place of resort is essential to all habitual prostitutes, clandestine as well as avowed, but we find that the operation of the Act most seriously interferes with the existence of these places of resort. In the three towns of Plymouth, Devonport, and Stonehouse, there were 410 houses of ill-fame in December, 1868. In December, 1869, they had fallen to 131. (See Table XIII.)

[These convincing results of the influence of the Acts in favour of good morals, have been lately disputed by Mr. Duncan McLaren, M.P., who in a speech at Newcastle, last September, since republished as a pamphlet,* has undertaken to controvert the statements of the report of the Chief Commissioner of Metropolitan Police to the Admiralty, on the "Operation of the Contagious Diseases Acts," ordered by the House of Commons to be printed 8th August, 1870. Mr. McLaren charges this official document with putting forward "gross misrepresentations and exaggerations," in place of "honestly giving the true results of the tables in the report itself." He then undertakes to prove "these misrepresentations from the tables to be utterly unfounded on fact." Such unreserved allegations against an official report, would be made by a man careful of his reputation for accuracy, if for nothing else, only after most careful investigation; but his deductions are so evidently erroneous, that it is charitable to suppose Mr. McLaren did not revise the report of his speech after it was printed. This

* "Facts respecting the Contagious Diseases Acts," &c., by Duncan McLaren, Esq., M.P. Second edition. Ireland and Co., Manchester.

is not the place to introduce a refutation of Mr. McLaren's statements, but one or two remarks upon the two leading charges made by that gentleman, will denote their little value.

The first statement of the report attacked is this:—The Police Commissioner says "these returns show that 7,766 women have "been placed on the register, and that 4,750 have been removed "therefrom, that is—

2,558	left the district.
385	married.
451	entered homes.
1,249	were restored to friends.
107	died.
<hr/>	
4,750	

"leaving 3,016 on the register." (See Table XV.) But this statement is also supported by more minute information; for the report includes, on pp. 8 and 9, returns which give the total numbers of common women known to have been residing in the various towns under the Acts on the last day of every year of the Acts' operation in those towns. For example, Portsmouth had, on 31st December, 1865, 1,355 prostitutes; who have year by year decreased to 730 on 31st December, 1869, and the same in the other districts. Next, the report gives on p. 3 a return which shows the number put on the register in each year, and the number removed, with the reasons that led to their removal. It is also stated more than once (pp. 3 and 10) that in consequence of the want of sufficient hospital accommodation during the early operation of the Acts, only the women strongly suspected to be diseased were put on the register. How well-grounded was this suspicion, is shown by the first year's operation of the Acts at Devonport, where 203 women were put on the register, of whom 202 were sent to hospital. A moment's comparison of the numbers put on the register, with the numbers known to the police, would have saved Mr. McLaren from the absurdity of accusing the police of pretending to have put 7,766 women on the register at the very first operation of the Acts, while it is obvious that some of these 7,766 are in the towns brought under the Acts in the present year. Yet, this is assumed in the face of the clearest evidence, by Mr. McLaren. The next absurdity is his conclusion, that because the number of women added to the register was larger in each succeeding year, that the actual number of the prostitutes in the subjected towns, also increased instead of diminishing, as stated in the police report. The number put on the register increased because two causes were at work to render the accommodation in hospital equal to the demand. 1. The Government, finding the experiment prove beneficial, allowed more beds to be devoted to the

treatment of the women. 2. The early seclusion and treatment of the women presently rendered the disease curable in a shorter time than it was at first. It was only in the latter part of 1868 that the supply of beds permitted the provisions of the Acts to be applied to *all* the notorious women in the district. Before that time there had been always a portion who were not interfered with at all.

The next point of the police report Mr. McLaren attacks, is the statement that disease has greatly diminished among the women. This is perfectly true, though the proof put forward to substantiate the statement is not altogether accurate. The report says that disease is now found only six times in every hundred examinations, where in 1868 it was found seventy times in every hundred examinations. The fallacy is this: *now*, every known prostitute is examined, but before 1868 the want of sufficient hospital accommodation rendered it useless to examine all the women, for the wards could be kept full by only taking such as were suspected, or avowed themselves to be diseased. Consequently at the present time a very much larger number of women free from disease are examined than formerly, and partly from this, the ratio of diseased to the number of examinations has lessened. Nevertheless, the prevalence of disease has also diminished. In every 100 women on the register 42 were diseased in 1868; but only 24 were diseased per cent. during the present year, notwithstanding that several new districts have been taken in and the examinations made much more frequent. (See Table XIV).

But this mistake in the police report is not detected by Mr. McLaren. He bases his assertion that disease has very greatly increased where the Acts are in force, on the fact that the number of women sent to hospital has greatly increased. This increased admission to hospital, has been shown to result from the hospital accommodation being now more ample; and thus it allows the provisions of the Acts to be applied to a greater number of women. Only a part of the disease prevailing among the women was caught and treated in hospital until recently; now it is nearly all detected and secluded. Further than this I need not go to show that Mr. McLaren's conclusions are untrustworthy. Any person desirous to do so can satisfy himself, after a very short perusal, that the Police Commissioners' report is a very valuable statistical document.]

APPENDIX.

TABLE I.—*Loss by Venereal Disease in the Home Army.*

Year.	Average Strength for the Year.	Admissions for Venereal per 1,000 of Mean Strength.	Loss in Days per Man of Whole Force of Effectives.		
			Syphilitic Group.	Gonorrhoeal Group.	Total.
1860	97,703	369	—	—	8·69
'61	88,955	354	—	—	8·56
'62	78,173	330	—	—	8·12
'63	75,945	306	—	—	7·4
'64	73,252	291	4·81	2·17	7·0
'65	72,999	282·8	—	—	6·59
'66	70,292	258·5	3·93	1·98	5·91
'67	73,420	291·5	4·06	2·19	6·25

Year.	Average Strength for the Year.	Admissions for Venereal per 1,000 of Mean Strength.	Average Number per 1,000 of Effectives constantly Off Duty.		
			Syphilitic Group.	Gonorrhoeal Group.	Total.
1860	97,703	369	—	—	23·69
'61	88,955	354	15·95	7·50	23·45
'62	78,173	330	10·82	—	22·24
'63	75,945	306	—	—	20·28
'64	73,252	291	18·18	5·92	19·10
'65	72,999	282·8	—	—	18·06
'66	70,292	258·5	10·76	5·43	16·19
'67	73,420	291·5	11·14	5·99	17·13

Year.	Average Strength for the Year.	Admissions for Venereal per 1,000 of Mean Strength.	Average Duration of each Patient's Stay in Hospital in Days.		
			Syphilitic Group.	Gonorrhoeal Group.	Total.
1860	97,703	369	—	—	23·5
'61	88,955	354	27·81	19·0	24·19
'62	78,173	330	—	—	24·61
'63	75,945	306	—	—	24·10
'64	73,252	291	—	—	23·43
'65	72,999	282·8	—	—	23·30
'66	70,292	258·5	28·13	16·68	22·86
'67	73,420	291·5	26·44	15·89	21·46

Note.—Compiled from the "Statistical Abstracts of the Health of the Army." The gaps are caused by the abstracts not giving the information in the same minuteness every year.

TABLE II.—*Venereal Disease in the Army. The Mean of the Yearly Ratios of the Admissions to Hospital per 1,000 of Mean Strength for Venereal Disease of all Kinds at Twenty-four Stations in the United Kingdom during Nine Years 1860-68.*

Station.	Mean of the Yearly Ratios.	Ratio in		Date of Act of 1866 coming into Force.
		1867.	1868.	
Portsmouth	388	378	348	October 8, 1866
Devonport and Plymouth.....	354	312	280	" 10, '66
Sheerness and Chatham	311	377	275	November 6, '66
Woolwich	291	255	191	" 6, '66
Aldershot	300	261	237	April 12, '67
Shorncliffe	260	215	297	July 27, '68
Colchester	435	500	537	January 27, '69
Winchester	349	288	349	" 6, '70
Dover	317	354	376	" 19, '70
Canterbury	363	375	407	February 5, '70
London and } Household Cavalry	132	129	133	April 1, 1868, for Windsor only
Windsor } Foot Guards...	321	326	343	
Cork	261	196	209	
Curragh	294	280	243	
Isle of Wight	302	327	346	
Warley	329	328	330	
Pembroke Dock	190	153	159	
Manchester	376	501	312	
Preston	337	361	379	
Edinburgh	244	244	157	
Fermoy	194	202	186	
Limerick	314	272	291	
Dublin	365	333	333	
Belfast	307	230	329	

Notes.—Compiled from the table at p. 88 of the "Appendix to Report of "Select Committee of House of Commons on the Contagious Diseases Acts," 8th July, 1869.

TABLE III.—*Comparison of the Admissions to Hospital per 1,000 of Mean Strength for PRIMARY VENEREAL SORE and for GONORRHOEA respectively, at the Military Stations in the United Kingdom where the Contagious Diseases Acts are, and are not, in Force.*

Year.	Stations under the Operation of the Contagious Diseases Acts.			Stations where the Act is not, or only just lately, put in Force.		
	Strength.	Primary Venereal Sore.	Gonorrhoea.	Strength.	Primary Venereal Sore.	Gonorrhoea.
1864	28,775	100	117	29,849	119	110
'65	30,169	96	117	30,391	103	117
'66	26,383	84	119	30,858	98	104
'67	26,677	86	131	31,462	106	127
'68	29,271	70	129	30,612	108	125
'69	29,437	59	106	28,196	111	102

Note.—Arranged from a table compiled under the direction of Dr. Balfour, F.R.S., Head of the Statistical Branch of the Army Medical Department.

TABLE IV.—*Difference in the Ratio of Admissions per 1,000 of Mean Strength for PRIMARY VENEREAL SORE and GONORRHOEA in the Home Army in 1869, as Compared with the Admissions of Former Years.*

Stations.	Primary Venereal Sore.									
	1869 was Higher than					1869 was Lower than				
	1864 by	1865 by	1866 by	1867 by	1868 by	1864 by	1865 by	1866 by	1867 by	1868 by
Devonport.....					8	36	59	8	2	
Portsmouth						59	51	38	54	24
Chatham						47	45	42	30	22
Woolwich					6	28	24	37	38	
Aldershot						42	37	18	18	14
Colchester						33	22	88	60	97
Shorncliffe.....			3	18		22	8			17
Dover		18				10		10	52	31
Canterbury						23	32	72	74	69
Winchester		29	55	49		10				3
Isle of Wight	55	97	118	70	26					
Warley	9						36	18	13	31
Pembroke Dock			20	23	16	14	32			
Manchester	56	83	68		45				17	
Preston	73	87	97	85	85					
Edinburgh			2		14	6	52		3	
Cork			24	1	12	3	13			
Fermoy	82	72	80	46	69					
Limerick			6			75	17		63	60
Curragh			11		3	41	11		26	
Dublin	1	30	54	51	41					
Belfast		6				57		22	37	4

Stations.	Gonorrhoea.									
	1869 was Higher than					1869 was Lower than				
	1864 by	1865 by	1866 by	1867 by	1868 by	1864 by	1865 by	1866 by	1867 by	1868 by
Devonport.....	8						25	45	54	24
Portsmouth						5	12	41	55	63
Chatham						32	25	47	17	42
Woolwich	2	6	4						27	7
Aldershot			16	5	4	17	8			
Colchester						32	23	43	81	79
Shorncliffe.....	9	4						11	25	23
Dover	11	21	=					=	32	77
Canterbury		36	5			37			40	74
Winchester				2		50	75	16		41
Isle of Wight	40	21		20	37			13		
Warley						88	113	128	139	102
Pembroke Dock		7	12			40			32	17
Manchester	15						42	39	130	4
Preston			75	24	22	25	3			
Edinburgh			1		1	15	50		47	
Cork			18	5	=	23	7			=
Fermoy	9	35	17						14	20
Limerick						43	128	7	58	66
Curragh						29	16	13	40	32
Dublin	21		14	6	10		14			
Belfast	52		62	78			26			89

Note.—Compiled under the direction of Dr. Balfour, F.R.S., Head of the Statistical Department of the Army Medical Department.

TABLE V.—*Number of Cases of COMMON WOMEN Admitted into Lock Wards of Hospitals, the Number of SOLDIERS, SEAMEN, and MARINES, under Treatment for VENEREAL, who Contracted the Disease in the Several Districts under the Acts; the Strength of the Army and Navy in Garrison and Port, and the Percentage of Disease existing amongst them, for each of the Years the Acts have been in Operation.*

Year ending	Number of Cases of Common Women Admitted into Lock Wards.	Number of Men Treated for Venereal.			
		Soldiers.	Seamen.	Marines.	Total.
31st December, 1865	783*	2,508	1,762	955	5,220
" '66	1,103	2,660	1,606	1,292	5,557
" '67	1,977	5,546	1,764	1,163	8,473
" '68	4,363	4,537	1,241	1,347	7,125
" '69	4,767	4,068	1,338	1,018	6,424

Year ending	Strength of Army and Navy.				Percentage of Venereal Disease in Army and Navy in the Districts.
	Soldiers.	Seamen.	Marines.	Total.	
31st December, 1865	11,322	10,566	5,930	27,818	22·68
" '66	16,203	12,701	8,685	37,589	18·87
" '67	26,065	13,674	8,984	48,723	18·00
" '68	29,938	15,914	6,929	52,781	12·19
" '69	32,789	14,342	6,781	53,912	11·06

* Women only known to be diseased were, in the first instance, brought up for examination, on account of the limited hospital accommodation.

Note.—The numbers shown for the year 1865 are for Portsmouth, Devonport, Sheerness and Chatham. Woolwich is included in 1866, Aldershot in 1867, Windsor and Shorncliffe in 1868, and Colchester in 1869.

(Reprinted from "Report of Chief Commissioner of Police to the Board of "Admiralty, on the Operation of the Contagious Diseases Acts," ordered by the House of Commons to be printed, 8th August, 1870)."

TABLE VI.—*Venereal Disease in the Royal Navy. Showing the Loss of Time and Money through Venereal Disease, among the CREWS of Her Majesty's Naval Forces on the Home Station during the under-mentioned Years.*

Year.	Strength.	Total Number of Days' Sickness from Venereal.	Ratio Constantly Sick per 1,000 of Mean Force.	Cost of Venereal in Money.*
1861	22,900	106,854	12·7	£ 23,462
'62	20,760	96,207	12·6	21,203
'63	21,570	101,595	12·7	22,008
'64	19,630	90,480	12·3	19,931
'65	20,980	103,157	18·3	22,733
'66	21,200	76,429	9·6	16,840
'67	21,600	72,132	8·1	15,898
Total	—	—	—	142,075

* Per man—wages, 32*l.*; victual, 19*l.*; hospital, 29*l.* 10*s.*

Note.—Compiled from the "Statistical Abstracts of the Health of the Navy."

TABLE VII.—*Relative Proportion of PRIMARY VENEREAL SORE and CONSTITUTIONAL SYPHILIS, in those sent to the Military Hospitals of Portsmouth, during the Last Quarters of 1868 and 1869.*

Last Quarter of	Strength of Garrison.	Primary Sore.	Constitutional Syphilis.	Total.	Ratio per 1,000 of Strength.
1868.....	5,189	108	38	146	28
'69.....	4,954	69	21	90	19

TABLE VIII.—*Effect of Contagious Diseases Act on CONSTITUTIONAL SYPHILIS. Admissions of all Kinds of Disease, and Proportion of Venereal at the Royal Naval Hospital, Plymouth.*

Year.	Total Admissions into Hospital.	Total Venereal Admissions.	Primary Syphilis.	Secondary Syphilis.	Gonorrhoea.
1865	1,797	675	320	270	84
'66	1,964	558	249	233	76
'67	1,786	411	185	173	53
'68	1,804	419	156	156	107

TABLE IX.—*Total Number of Female Lock Cases passed through the Royal Albert Hospital, Devonport, since the Institution was Opened on 3rd December, 1867, and the Percentage of simply Local Disease and of Constitutional Syphilis with or without Local Discharge.*

	Local Sores and Discharges.		Constitutional Syphilis, with or without Local Disease.		Totals.
	Number.	Per Cent.	Number.	Per Cent.	
<i>Before the Act—</i> 3rd December, 1863, to 31st March, 1865, 484 days	192	68·08	90	31·91	282
<i>Act of 1864—</i> 1st April, 1865, to 30th September, 1866, 548 days	318	75·35	104	24·65	422
<i>Act of 1866—</i> 1st October, 1866, to 31st March, 1867	122	78·71	33	21·29	155
„ April, 1867, to 30th Sept., '67	137	81·55	31	18·45	168
„ October, 1867, to 31st March, '68	187	78·57	51	21·43	238
„ April, 1868, to 30th Sept., '68	655	86·87	99	13·13	754
„ October, 1868, to 31st March, '69	755	90·42	80	9·58	835
„ April, 1869, to 31st December, '69	925	87·18	136	12·81	1,061

Note.—This table is compiled from the official return signed by Thomas Woolcombe, Esq., chairman of the committee of the hospital.

The first period comprises those women who were voluntary patients received into the charity; in this period twenty women suffering from gonorrhoea, and forty-eight with syphilis, were discharged uncured at their own request. The second, that of the Act of 1864, when women were sent to hospital solely by a magistrate's order, and maintained there at Government expense. The third period comprises the operation of the present Acts. It must be borne in mind that the amount of accommodation in hospital was at first greatly less, than equal to the number of diseased women. Hence until Midsummer, 1868, the provisions of the Acts were applied only to the women strongly suspected of being diseased. Since that time, however, all the common prostitutes known to the police have been periodically examined, and all found diseased sent to hospital.

TABLE X.—*Comparative Return of the Number of Paupers Treated for Venereal Diseases in the Devonport, Stonehouse, and Plymouth Work-houses for Three Years prior to Operation of the Acts, and the Three Years last past.*

Years.	Males.	Females.	Total.	
1862-64.....	149	706	855	{ Before operation of Contagious Diseases Acts
'67-69.....	55	167	222	{ After operation of Contagious Diseases Acts

TABLE XI.—*Syphilis among the Young Male Adult Population of Great Britain. Number of Intending Recruits Rejected for Constitutional Syphilis.*

Year.	Number Rejected.	Ratio per 1,000 of Intending Recruits.
1864.....	468	16·86
'65.....	390	15·65
'66.....	338	16·51
'67.....	440	16·51
'68.....	303	12·88

Notes.—Extracted from the “Yearly Statistical Reports of the Health of the “Army.”

TABLE XII.—*Invaliding for Venereal Diseases in the British Army.*

Year.	Number Discharged for Venereal.	Ratio per 1,000 of those Invalided.
1864.....	106	24
'65.....	185	39
'66.....	146	24
'67.....	172	52
'68.....	131	38

Note.—Extracted from the “Official Statistical Reports on the Health of the “Army.”

TABLE XIII.—DIMINUTION OF PROSTITUTES and BROTHELS in the *Devonport District of the Contagious Diseases Acts*. *Population by Census of 1861, 127,382: Estimated Increase for 1864, date of the First Act, 136,950. Usual Strength of Naval and Military Forces, 10,000 Men.*

Period.	Total Brothels known at the under-mentioned Dates.	Total Women known as Prostitutes by the Police at the under-mentioned Dates.	Number of Women who have been on the Register of the Acts in each Year ending	Number of Women who have been Removed from Register in each Year ending
31st December, 1863	—	1,960	—	—
„ '64	410	2,020	—	—
„ '65	356	1,770	203	141
„ '66	280	1,310	395	175
„ '67	206	1,010	515	125
„ '68	170	820	1,503	674
„ '69	131	661	1,189	528
24th September, '70	—	564	878	1,314
Total added to register....	—	—	2,525	—
„ removed	—	—	—	1,957

Note.—This table is compiled from information supplied by the Metropolitan Police stationed at Devonport. At the request of the Admiralty the information was obtained in the following manner:—

The first return for 1863 is the result of the officers of the force visiting each brothel, and writing down the number of women stated to sleep in each house. The return of 1864 was obtained by a more precise investigation. The officers visited every brothel, and noted down her name and address from each prostitute herself.

The diminution of 1865 was produced in the following way:—On the first operation of the Act of 1864, which took place 1st April, 1865, about 300 young girls, belonging to the mining districts, left Devonport for their homes. Since that time the police have, by persuasion, induced nearly 200 more to return to their friends. None of these are included in the number of the women who have been returned to their friends *after* coming under the operation of the Contagious Diseases Acts, as they were never put on the register of women to whom the provisions of those Acts applied.

At Midsummer, 1868, the accommodation in hospital became sufficient to receive all the women likely to be found diseased; since which time all the prostitutes known to the police in Devonport have been subjected to periodical examination, and the diseased sent to hospital. Prior to that date, only those women suspected of disease were examined.

TABLE XIV.—*Showing the Gradual Decline in the Prevalence of Disease among the Women subjected to the Contagious Diseases Acts, from 1st January, 1868, to the Present Time.*

Number of Hospital Beds Provided.	Period.	Number who have been on the Register in each Quarter; Number of Times Disease was Found among them; and the Percentage of the Disease to the Number on the Register.		
		Number of Women.	Number Diseased.	Ratio per Cent.
	1868.			
348	1st quarter.....	1,955	811	41'5
484	2nd ".....	2,583	1,094	42'3
517	3rd ".....	2,966	1,296	43'6
517	4th ".....	2,899	1,220	42'0
	1869.			
542	1st quarter.....	3,020	1,254	41'5
582	2nd ".....	3,008	1,226	40'7
582	3rd ".....	2,958	1,138	38'9
582	4th ".....	2,883	1,092	37'8
	1870.			
672	1st quarter.....	3,467	1,249	36'0
672	2nd ".....	3,775	1,027	27'2
672	3rd ".....	3,672	993	24'3

Number of Hospital Beds Provided.	Period.	Proportion per Cent. of Cases of Disease to the Number of Examinations Made.			Average Number of Examinations per Quarter of each Woman on the Register.
		Number of Examinations.	Cases of Disease.	Ratio per Cent.	
	1868.				
348	1st quarter.....	1,274	811	63'6	0'6
484	2nd ".....	2,212	1,094	49'4	0'8
517	3rd ".....	3,307	1,296	39'1	1'1
517	4th ".....	4,668	1,220	26'1	1'6
	1869.				
542	1st quarter.....	6,974	1,254	17'9	2'3
582	2nd ".....	8,037	1,226	15'2	2'6
582	3rd ".....	9,745	1,138	11'6	3'2
582	4th ".....	9,922	1,092	11'0	3'4
	1870.				
672	1st quarter.....	12,342	1,249	9'1	3'5
672	2nd ".....	13,638	1,027	7'5	3'6
672	3rd ".....	13,139	993	7'5	3'5

Compiled from the "Quarterly Returns" of the Metropolitan Police.

Note.—Quoted from "Facts respecting the Contagious Diseases Acts: an Answer to Mr. McLaren," by James R. Lane, F.R.C.S., Senior Surgeon to the London Lock Hospital: London, 1870.

TABLE XV.—*Number of COMMON WOMEN coming within the Provisions*

Period.	Number of Women put into the Register in each of the Under-mentioned Years.	Number Removed from Register.						Remaining on Register.
		Simply Left the District.	Married.	Entered Homes.	Restored to Friends.	Died.	Total Removed from Register.	
31 Dec., 1864	30	—	—	—	—	—	—	30
„ '65	823	67	11	15	74	4	171	652
„ '66	798	181	15	40	101	15	352	446
„ '67	1,145	858	46	59	140	15	618	527
„ '68	2,215	738	105	183	444	23	1,443	772
„ '69	1,814	998	156	143	377	41	1,715	99
26 Mar., '70	941	216	52	61	113	9	451	490
Total	7,766	2,558	385	451	1,249	107	4,750	3,016

* Women only known to be diseased were, in the first instance, brought up for examination. Reprinted from "Report of Chief Commissioner of Police to the Board of Admiralty on the 8th August, 1870.

N.B.—An additional column, giving the total numbers removed from the register has been headings of Cols. 2, 3, 10, 11, and 12, have been slightly altered to make the meaning more "Found," is worded in the Parliamentary paper, "Number Examined and Found Free of examinations, in which the same women have appeared over and over again.

of the Contagious Diseases Acts in each of the Undermentioned Years.

Further Proceedings Taken in the Cases.					Operations Commenced	
Number of Examinations in which no Disease was Found.	Number of Cases of Disease Admitted to Hospital on Certificate of Visiting Surgeons.	Number of Times which the Women, on being Discharged from Hospital Free from Disease, have Returned to their Former Pursuits.	Number Discharged Incurable.	Number against whom it was Necessary to Proceed by Information before Magistrates.	On	At
12	18	6	—	—	3 Dec., 1864	Portsmouth
244	783*	570	—	—	{ 1 April, '65	Devonport
					{ 9 June, '65	Sheerness
					{ 12 „ '65	Chatham
558	1,108	865	19	—	14 Nov., '66	Woolwich
1,362	1,977	1,622	36	—	12 April, '67	Aldershot
6,605	4,363	3,754	58	12	{ 1 „ '68	Windsor
					{ 27 July, '68	Shorncliffe
29,515	4,767	4,355	63	9	27 Jan., '69	Colchester
					{ 2 „ '70	Greenwich
					{ 6 „ '70	Winchester
					{ 19 „ '70	Dover
11,093	1,249	1,089	6	11	{ 21 „ '70	Canterbury
					{ 5 Feb., '70	Deal
					{ 15 „ '70	Maidstone
					{ 17 „ '70	Gravesend
49,389	14,260	12,211	182	32		

on account of the limited hospital accommodation.

Operation of the Contagious Diseases Acts," ordered by the House of Commons to be printed,

interpolated between the column of "Died," and that of "Remaining on Register." Also, the year. For example, the tenth column, "Number of Examinations in which no Disease was Disease." Obviously, if only 7,766 women have been registered, the total 49,389 must refer to the

On WOOL SUPPLY. By ARCHIBALD HAMILTON, Esq.

[Read before the Statistical Society, December, 1870.]

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THE *Statistical Journal* for March, 1859, contains a valuable paper, by Mr. Edward Baines, on the woollen manufacture of England, besides which it has elsewhere been frequently discussed, and has formed the subject of several volumes by various writers. I propose, therefore, to limit this paper to the consideration of the supply of wool, as well as to place on record the more important facts connected with the trade in the raw material.

The importations of wool during the last fifty years have increased with such marvellous rapidity, that this material now ranks second in importance as regards our textile industry; and has this peculiarity, that whereas cotton and silk are produced only in certain latitudes, and in comparatively few countries, wool is produced, more or less, in all countries. Another characteristic is the great variety of qualities, comparing the produce of one country with another, or even of different districts in the same country—each fleece indeed contains several “sorts” adapted for various purposes—so that there is perhaps no single article of commerce that gives rise to so many dealings as wool: interchange of their produce takes place even between manufacturing countries; for example, we import from Germany seven millions of pounds annually, and the German manufacturers take two and a-half million pounds of English wool, in addition to yarn spun from the same material.

Again, wool is so much preferred to any other material for nearly all clothing purposes, that the use of woollen and worsted goods has hitherto been restricted only by the cost—the consumption extending readily as the price of wool becomes less—and notwithstanding the extraordinary increase in the imports, there has been as yet no accumulation of wool in stock, if we except the

thus determined, it only remains to ascertain the average weights of fleece of the different breeds, to arrive at a pretty close estimate of the clip.

Mr. Luccock, in the year 1800, published a detailed estimate of the weights of fleeces, which was revised in 1828 by Mr. Hubbard, and again in 1840. In 1851 Mr. Thomas Southey, after extensive inquiries, took the average for the United Kingdom at five pounds.

Since the earlier of those dates, considerable changes have taken place in the actual weights of fleece, owing to improved breeding; and even during the last twenty years this has been the case with the sheep bred in agricultural districts, though not so much with those bred on pasture lands. The weights, moreover, are considered to vary from year to year as much as from a quarter to half a pound per fleece, according to the seasons and breed.

I am indebted to Mr. Legg, of Bermondsey, and Messrs. J. and J. Hubbard, of Bradford, for much important information on this subject, and the latter gentlemen write, that "in all the counties suitable for the heavier class of sheep, the weight of fleece has very considerably increased during the last twenty years, it having been found to the profit of the grower to cross with Leicester, &c., sheep, both as regards the wool and the mutton. A considerable buyer of wools in Cambridgeshire writes us, that 'the weight of wools grown in that district has doubled or almost trebled during the fifty years I have been a buyer, not only as regards the number of sheep kept, but the weight of fleece.'"

I am further indebted to Messrs. J. and J. Hubbard for a statement of the average weights of fleece for each county in England, the particulars of which will be found in Appendix, Table No. I.

The weights of fleece in Wales and Scotland cannot be so readily estimated by counties, but rather by the general features of each country, as mountain, hill, and lowland; and Mr. John R. Hubbard, of Liverpool, estimates the averages thus, for—

Wales—

Mountain fleeces	1½ to 2½ lbs.
Hill	3 " 4 "
Lowland	5 " 7 "

Equal to a general average of 4½ lbs.

Scotland, the same authority divides as follows; counties south of the Firths of Forth and Clyde produce wools similar to Northumberland and Cumberland, with the breed peculiar to the Cheviots; the country north of the Firth of Forth, on the eastern side to Aberdeen, and including Perthshire, produces various kinds of wool, more or less adapted for combing; in the Western Highlands, up to Caithness and Sutherland, the wool is of a peculiar coarse breed,

which is shorn, washed, unwashed, or smeared, according to the climate to which the sheep are exposed in those mountainous districts;—but in all of them a better class of sheep is fed on the hillsides and valleys, and, as a rule, there has been an increase in the weight of fleece during the last twenty years, owing to crossing the breeds with heavier sheep whenever the pasture would admit of it, thus producing a better wool and increasing the weight of carcase. Accordingly Mr. John R. Hubbard, and Mr. G. A. Mackenzie, of Liverpool, have furnished me with the following estimates of the average weight of Scotch fleeces, viz. :—

Laid Highland (smeared with a composition to protect the sheep from the weather)	5½ to 6 lbs.
White Highland (the same, not smeared)	3½ " 4 "
Laid Cheviot (smeared), washed	4½ " 5 "
" ("), unwashed	5½ "
White Cheviot (not smeared), washed	4 "
" ("), unwashed	4½ "
Laid cross (smeared), washed	5 "
" ("), unwashed	5½ "

In Ross-shire the fleeces are about half a pound heavier than the above, but in Sutherland, Inverness, and Perthshires they are as above stated. It is estimated that these weights will yield a general average for Scotland of $4\frac{3}{4}$ lbs.

Irish wools may be classed under the following heads, viz. :—

Mountain fleeces, average	3 to 5 lbs.
Seaside "	3 " 5 "
Pasture "	5½ " 6 "
Roscommon "	10 " 12 "
Cotawold, Lincoln, Leicester, and Cheviot breeds, } range from	5 " 11 "

but several authorities agree in putting the general average of the Irish fleece at 6 lbs. to $6\frac{1}{2}$ lbs.

In the "Bradford Observer" of 13th October last, an estimate was published of the clips during the last three years, by Mr. Bottomley, a merchant largely engaged in the wool trade, which is based on the agricultural returns, and the results of his calculations are these :—

	lbs.
Net clip of wool, 1868	165,550,000
" '69	155,591,000
" '70	149,517,000
Average	<u>156,886,000</u>

It appears, however, that in these calculations, as in all previous estimates, there has been an error in multiplying the total number

of sheep and lambs by the average weights of fleece, instead of taking the sheep only, and estimating the lambs separately. A more accurate method appears to me to be as follows:—

Taking the years 1867-69 for which the returns for counties are complete, the average number of sheep 1 year old and upwards is 22,189,804 for the United Kingdom, and in Appendix, Table No. I, will be found the details, based on Messrs. Hubbard's information, by which I estimate the quantity of wool from the sheep shorn at 124,017,421 lbs., or $5\frac{1}{2}$ lbs. per fleece.

Lambs are shorn in the undermentioned counties in the proportions stated, viz.:—

	Weight of Fleece.
Cornwall, all shorn, unwashed	3 lbs.
Devon "	3 "
Kent, nearly all shorn.....	$1\frac{1}{2}$ "
Somerset, about four-fifths shorn	$1\frac{1}{2}$ "
Salop " one-fourth "	$1\frac{1}{2}$ "
Hereford " " "	$1\frac{1}{2}$ "
Sussex, scarcely " "	$\frac{3}{4}$ "
Dorset, about " "	$\frac{3}{4}$ "

From these data, taking the average number of sheep under 1 year old for 1867, 1868, and 1869, I estimate the amount of lambs' wool at 2,470,158 lbs.

The skin wool from sheep and lambs slaughtered during the year, also from carrion, remains to be computed. It being impossible to ascertain with any certainty the annual consumption of mutton and lamb, it will suffice for my purpose to assume that, on an average of years, the stock of sheep in the United Kingdom is maintained. For the four years 1867-70, the averages stand thus on 25th June:—

Total of all ages	34,138,273
One year old and upwards	21,963,135
Under 1 year	12,175,138

Taking each year separately, these proportions vary but slightly, and assuming the same proportions to be kept up, it follows that 12,175,138, would be equal to the number of sheep and lambs killed during the year, in addition to the lambs slaughtered prior to 25th June; these latter would, however, have but little wool, and I may fairly set them, together with the carrion sheep, against the number of skins that are used for rugs and other purposes, with the wool left upon them.

Mr. Caird assumes (*Journal* for June, 1868) that one-third of the sheep and lambs in number in England and Ireland and one-fourth in Scotland are sold to the butchers. This would give, on the average of four years as above, 11,529,599 slaughtered.

Another mode of estimating would be to divide the total number of sheep and lambs by the average age of those killed, but this is difficult to ascertain. From inquiries I have made in different parts of the country, the replies are so contradictory—ranging from twenty months to two and a-half years, sheep and lambs being taken together—that I have been unable to arrive at any satisfactory conclusion.

I am, however, disposed to rely on the first mode of estimating, and Mr. Bottomley's calculation above alluded to is based on the same principle, viz., to take the number returned under 1 year as equivalent to the number slaughtered, say 12,175,138; and several competent authorities concur in allowing for the wool at $2\frac{1}{2}$ lbs. per skin = 33,481,629 lbs.

My estimate of home-grown wool, therefore, sums up thus:—

	lbs.
From sheep shorn	124,017,421
„ lambs „	2,470,158
Skin wool	33,481,629
Total	<u>159,969,208</u>

II.—Imports of Wool, Foreign and Colonial.

It is unnecessary that I should enter into the history of this branch of my subject, as all that could be said may be gathered by a glance at the general table of imports of sheep and lambs' wool, commencing with the earliest return in 1796, down to 1869, the latest. (Appendix No. II.)

From this it will be observed that, until the year 1818, we derived our supplies of merino wool for fine clothing purposes chiefly from Spain. These were then overtaken by the imports from Germany; after which the Spanish supplies fell off, until they have now dwindled to a mere trifle. The German wools maintained the lead until 1843, when they had in their turn to yield the palm to the produce of the Australian colonies. German wools are, however, still in considerable request, being used for the finest descriptions of broadcloth and so-called Saxony flannel.

The general table of imports (Appendix No. II) has been compiled as comprehensively as possible, so as to exhibit the quantities derived from all the chief sources of supply, and to show the importations from each of our colonies from its commencement. The table shows a steady increase in the imports,—with very few exceptions the total of each year being greater than that which preceded. The figures for 1869 give the following totals:—

	lbs.
Australian and New Zealand colonies	158,478,000
Cape and Natal.....	34,308,000
East India.....	18,797,000
River Plate	8,027,000
Other countries.....	35,551,000
Total sheep and lambs' wool	<u>255,161,000</u>

To the wool imports there should be added an estimate of the skin wool from sheep imported for slaughter. Taking an average of four years ending 1869, the number was 595,149; and as these come mostly towards the end of the year, Mr. Legg considers they will yield 4 lbs. each, equal to 2,380,596 lbs. of wool.

In Appendix No. III will be found a table of imports of alpaca, llama, and goats' wool, from 1853 to 1869 inclusive, which calls for no comment.

III.—Exports of Wool, Domestic, Foreign, and Colonial.

Appendix No. V comprises the exports to various countries during the last fifty years, from 1820 to 1869 inclusive, distinguishing domestic from foreign and colonial wool. It will be seen that the exports of British wool during the last twenty years have fluctuated somewhat, but have not on the whole increased, and have averaged rather more than 11,000,000 lbs., while the exports of foreign and colonial wools during the same period have risen from 14,000,000 to 116,000,000 lbs.; indeed, it has been observed of late years that, at the London sales of colonial wool, about one-half the quantity has been bought for France, Belgium, and Germany.

It would appear, therefore, that the quantity retained for home consumption in the year 1869 may be stated thus:—

	lbs.
Domestic wool, as estimated	159,969,000
Foreign and colonial imports	255,161,000
Skin wool from imported sheep	<u>2,381,000</u>
	417,511,000
Exports—Domestic	12,410,000
" Foreign and colonial	<u>116,589,000</u>
	128,999,000
Leaves for home consumption	<u>288,512,000</u>

IV.—Produce of the Colonies.

I shall now proceed to remark briefly on the chief sources of our wool supply. Appendix No. II gives the imports severally from our colonies from their commencement; but, in order more clearly to exhibit the extraordinary growth of this industry, I

subjoin a table showing the quinquennial averages of exports from each colony, commencing from 1838 to 1867 inclusive:—

Total Export of Wool from the Colonies.

[000's omitted.]

Quinquennial Averages.	New South Wales.	Victoria.	Tasmania.	South Australia.
Years inclusive	lbs.	lbs.	lbs.	lbs.
1838-42	6,594,	1,286,	5,093,	—
'43-47	10,056,	6,322,	3,979,	1,294,
'48-52	13,294,	15,915,	4,782,	2,887,
'53-57	17,850,	21,114,	4,269,	6,818,
'58-62	15,946,	23,324,	4,943,	11,079,
'63-67	25,939,	40,656,	4,803,	17,404,

Quinquennial Averages.	Western Australia.	Queensland.	New Zealand.	Cape.	Natal.
Years inclusive	lbs.	lbs.	lbs.	lbs.	lbs.
1838-42	—	—	—	887,	—
'43-47	—	—	—	2,885,	—
'48-52	—	—	474,*	5,566,	—
'53-57	464,	—	1,661,	12,230,	—
'58-62	665,	—	6,154,	21,974,	—
'63-67	1,115,	14,399,	19,685,	84,325,	1,572,

* Four years only.

This important source of wealth to our manufacturers, as well as to the colonists, is due to the foresight and perseverance of Mr. John MacArthur, who, at the beginning of the century, introduced the merino sheep into New South Wales. The example was followed by the settlers in Van Dieman's Land (Tasmania), and from those colonies sheep were introduced into the sister settlements as they were successively colonised, viz., Victoria, South Australia, New Zealand, and Queensland. It is, therefore, not without reason that the Australian colonies (including New Zealand) are usually grouped together for statistical purposes.

It was due to the example of the Australians that the Cape colonists, about the year 1827, turned their attention seriously to the production of merino wool. The export of fine wool in appreciable quantities commenced in 1834 to 1836; previously to that date, the little that was shipped consisted of coarse hairy wool from the native sheep, of which it was roughly estimated there were 3,000,000 in the colony, and in the north-western districts the breed still exists. These sheep are covered with hair rather than wool, and are remarkable for their large fat tails, which thirty or forty years ago were salted and exported to this country, being used for pastry instead of lard or butter. Unlike Australia,

where no sheep previously existed, the growth of fine wool at the Cape was greatly facilitated by crossing the indigenous breed, and the earlier exports, in consequence, increased with wonderful rapidity. Of late years the Angora goat has been introduced at the Cape, with every promise of success.

From an examination of the yearly export from the colonies—on which the preceding table of quinquennial averages is based—it appears that, with the exception of Tasmania and Swan River, the colonies are all increasing in the production of wool, with greater or less rapidity. Tasmania is probably fully stocked, and Western Australia is unfavourable for sheep, owing to the prevalence of an herb which is said to be poisonous to the animal; but as regards the other colonies, although the amount of wool produced is already so large, I am of opinion it will continue to increase for many years to come.

For a time it was supposed that in Victoria no more sheep could be accommodated, and during the years 1858-62 it will be seen, from the quinquennial averages, that there was but little progress. The runs, however, were made to carry more sheep by the introduction of fencing and confining the sheep to paddocks, so that during the next five years the exports rose from an average of 23 millions to 40 millions of pounds.

Possibly the present low prices may for a time check the rate of increase, and the colonists may have to slaughter for preserved meat, or even to boil down for tallow, as in former times. But as soon as the wool markets recover from their present depression the annual increase in the supplies of wool will assuredly recommence.

I take the following particulars from the preface to the "Agricultural Returns," 1869:—"The number of sheep is returned in 1868 at 37,441,000 for Australia; 8,418,000 for New Zealand, and 1,742,000 for Tasmania; making a total of 47,600,000 as the stock of sheep in the Australian colonies; which, compared with the colonial returns for 1867, shows the large increase of 4,000,000 sheep in one year. The latest return from the Cape of Good Hope is for 1865, and shows the number of sheep at that date 9,836,000. Comparing the stock of sheep at the dates of these returns and the quantities of wool exported from the colonies in 1867, the average is 3.75 lbs. for Australia and 3.65 lbs. for the Cape per head of the stock of sheep." It is to be observed, however, that these averages are incorrect, as the weight of fleece should be calculated on the sheep exclusively of the lambs. The averages stated are, therefore, below the reality, even if the premises are otherwise correct. Lambs are shorn only in Victoria, Tasmania, and New Zealand.

V.—*River Plate.*

The country which next merits attention, on account of its rapid increase in the production of wool, is South America, or, rather, the Argentine Republics and Uruguay, more especially because of the numbers of our countrymen who have of late years settled there; they have mostly engaged in pastoral pursuits, though the more recent settlers have turned their attention rather to agriculture, owing to the unremunerative prices recently prevailing for wool.

I subjoin a table of exports from the River Plate, from 1855 to 1866, inclusive.

[000's omitted.]

Year.	Buenos Ayres.	Year.	Monte Video.	Total Exports.
	lbs.		lbs.	lbs.
1855-56	26,099,	1856	2,175,	28,274,
'56-57	30,034,	'57	2,325,	32,359,
'57-58	31,402,	'58	3,050,	34,452,
'58-59	38,990,	'59	2,800,	41,790,
'59-60	38,821,	'60	No returns	
1860-61	48,587,	1861	5,650,	54,237,
'61-62	53,729,	'62	8,100,	61,829,
'62-63	71,024,	'63	12,000,	83,024,
'63-64	77,343,	'64	17,000,	94,343,
'64-65	104,688,	'65	22,675,	127,363,
'65-66	109,120,	'66	28,950,	138,070,

equal to an increase in the course of eleven years of 388 per cent.

This wool, it should be observed, is shipped, nine-tenths of it in grease, so that 50 to 55 per cent. should be deducted from the weight for comparison with the washed wool of other countries. About one-half goes to Belgium, upwards of one-fourth to France, and the rest to Germany, United States, and England. The prevalence in River Plate wool of a seed called the "Burr" has hitherto restricted its consumption in this country. But in Belgium a machine (of English invention) has been adopted, which effectually removes the burr; hence the large proportion of this wool taken by that country. It is to be observed that our imports of woollen yarn, chiefly from this source, are steadily and even rapidly increasing; in 1855, the quantity was 461,000 lbs., and in 1869, we imported no less than 9,588,000 lbs. of woollen yarn for weaving purposes.

With regard to other countries from which we derive supplies, it may suffice for the present merely to refer to the particulars comprised in the general table of imports (Appendix No. II).

VI.—*Duties.*

As regards the duties which have been levied on wool by the various manufacturing countries, it may be interesting to state that

in this country wool was admitted free from 1787 until 1802, when a duty of 5s. 3d. per cwt. was levied; in 1813 this was raised to 6s. 8d. per cwt.; but in 1819 a protective duty of 56s. per cwt., or 6d. per pound, was imposed, at the instance of the landed interest and wool growers. In 1825 this was amended by Mr. Huskisson, after a severe struggle, which resulted in the first victory gained by free trade principles. Colonial wools were then declared free, while on foreign wools the duty was reduced to 1d. per pound if worth 1s. and upwards, and to $\frac{1}{2}$ d. per pound on wool of less value. An attempt was made to reverse this decision before a Committee of the Lords in 1828, when it was conclusively shown, that so far from being injurious to the interests of the wool growers, the introduction of foreign wools was beneficial; enabling the manufacturers to obtain the necessary variety of qualities, without which their trade would decline, and with it the price of home-grown wool. In 1844 the duty on wool was entirely removed.

France, Germany, and Belgium have followed our example, and admit wool free; while it is not a little curious to find the same battle raging at present in the United States, which was fought out in this country in 1825 and 1828, with reference to an import duty on wool. Mr. Wells's report for 1869, to the Government at Washington, demonstrates the ruinous effects of the present prohibitory duty, not only upon their manufacturers, but likewise upon the price of domestic wool. It would, however, be beside my purpose to enlarge upon this subject, I need only remark that the capricious nature of the American tariffs has exercised considerable influence on European markets, and that the Act of Congress, 1867, forms a striking parallel, both in its policy and motives, to the Act of Parliament of 1819; the difference being that the former is all but prohibitory, whilst ours was merely protective. In Appendix No. IV, will be found the particulars of the last and present American tariff on wool.

VII.—*London Public Sales.*

I shall now proceed to explain the manner in which the London public sales of colonial wool are conducted. These have been regulated by an association, formed in 1836, and are conducted on principles which have been considered an example to those interested in other articles of produce. In each year there have been held four series of public sales, and in Appendix No. VI, there is a table giving full details from 1839 to 1870 inclusive; all the wool which has arrived up to the commencement of each series is entitled to be included therein, and the entire quantity arrived has usually been put up and sold—it being rarely the case, and under exceptional circumstances, that any is withdrawn or bought in when once put up to sale; a

practice which has on the whole been of great advantage to the sellers. The bales are lotted by the brokers from samples drawn from one end, and on the day of sale the buyers view the wool in bulk at the warehouse, examining the bales at the other end; the sale takes place in the evening, and 80,000*l.* to 100,000*l.* worth of wool is thus disposed of in a day; indeed, one day's sale in the series just concluded consisted of 8,000 bales, and amounted to over 120,000*l.* The sales are all for cash in fourteen days, without discount.

In this manner, as much as 13,000,000*l.* to 15,000,000*l.* per annum has, of late years, been disposed of; the payments having been met with unexampled punctuality, and the trade has been almost, if not entirely, free from speculative operations.

Nothing could have worked more satisfactorily than this system until recently, when it has, in my opinion, been outgrown by the quantity. It will be seen by the table, that during the last ten years the average number of bales in each day's sale has increased from 2,500 to 6,500, and in twenty years the average number of days in the year on which sales are held, has increased from 79 to 109.

Instead, therefore, of quarterly sales, or rather of four series of sales during the year, I am of opinion that it would be better to hold sales every alternate month; indeed, if the quantity continues to increase as it has done hitherto, some such change will ere long become absolutely necessary. Already 8,000 bales are more than can be examined by the buyers, in a November day for example, even though care be taken to offer an assortment of wool adapted to the manufacture of various kinds of goods; again, the lots now range from 1 bale to 50 bales, so that each bid of $\frac{1}{2}$ *d.* per pound may range from 25*l.* to 40*l.*, according to quality. In a dull market this must operate against the seller; moreover, the large lots tend to exclude the small buyers.

Besides which, too much is now thrown on the market at one time, which occasions fluctuations in the sales from day to day, to an extent not observable in former years, when the quantity declared for sale at a time was more within compass. At present the buyers are thrown too much on their bankers for assistance in preparing for their purchases, which would not be the case to the same extent if the sales occurred oftener. In times of dear money this operates injuriously; indeed, I am inclined to think that the wool sales may have occasionally turned the scale in favour of a rise in the rate of discount, owing to the buyers having to prepare through their bankers for cash purchases to the extent of 5,000,000*l.* or 6,000,000*l.* at one series of sales. At all events, I find that during the last ten years the bank rate of discount has been raised six times during the week on which wool sales commenced.

These drawbacks to an otherwise admirable system would, I think, be remedied by more frequent sales, but this is not the occasion on which to pursue the subject further.

VIII.—*Prices.*

I have next to call attention to the table of prices of home and colonial wool in Appendix No. VII, which has been compiled from the brokers' circulars, and through the kindness of Messrs. J. T. Simes and Co., I am enabled to carry it back to 1839. Upon a comparison of this table with the table of imports, it will be found that the fluctuations in the prices of colonial wool do not depend so much on supplies, which have been constantly increasing, as upon variations in demand, owing to commercial vicissitudes and political circumstances; thus the lowest point touched was in 1848, the year of continental revolutions, following on the commercial crisis of 1847. The panic of 1857 again affected prices, but not so seriously; on the other hand, the market was strengthened by the cotton famine in 1862 to 1866. But the memorable crisis of 1866, and its subsequent effects, followed by the war between France and Germany, have now depressed prices very nearly to the level of 1848. It seems probable that the present prices will operate as a check for a time on the rapid increase which has taken place in our importations. But, as already said, so great is the demand for woollen goods, and such the preference shown to wool for all manner of clothing purposes, that whatever quantity may come forward will readily be consumed; because the more cheaply woollen and worsted fabrics can be produced, the wider will be the area of consumption; instead of being mixed or adulterated with cotton, it will take the place of the latter wherever the two fibres come fairly into competition. I scarcely, indeed, hope that the word "shoddy" will disappear from the vocabulary of Yorkshire, though it may become less familiar. Nevertheless, I am of opinion that there is still a wide field for further increase in our importations, and that the production of wool will still constitute an indefinitely increasing source of prosperity to our manufacturers and to our colonies.

IX.—*Summary of Wool Production.*

In conclusion, I will attempt to estimate the entire supply of wool available for the consumption of Europe and America, because, as soon as the latter sees fit to adopt free trade in wool, all manufacturing countries will have a common interest in the supply, and all will benefit by the free importation and free interchange of the numerous descriptions of wool.

I base the following estimate on the numbers of sheep given

in the "Agricultural Returns" for 1869, though the estimate will readily be understood to be merely an approximation :—

Countries.	Date of Returns.	[000's omitted.]			Memoranda.
		Sheep and Lambs.	Weight.	Value.	
United Kingdom	1867-70 {	Average } 34,138,	lbs. } 159,969,	£ 7,998,	
Australia	'68	37,441,	152,200,	11,356,	Grease allowed for
Tasmania	'68	1,742,	6,136,	474,	10 per ct. grease
New Zealand	'68	8,418,	28,875,	1,564,	60 "
Cape of Good Hope } and Natal	'65	10,001,	38,001,	2,533,	15 "
River Plate	'66	Unknown	138,070,	3,452,	Grease—Exports
East India	'69	"	18,797,	627,	{ Imports to United Kingdom
Russia	1859-68	45,330,	90,760,	3,777,	
Sweden	'67	1,622,	6,082,	228,	{ Imports to United King- dom trifling
Norway	'65	1,705,	6,395,	225,	
Denmark	'66	1,875,	7,031,	322,	
North Germany, } Wurtemberg, } and Bavaria }	1863, '66, } and '67 }	25,251,	52,080,	4,340,	
Holland	1867	1,027,	6,163,	231,	
Belgium	'56	583,	3,500,	131,	
France	'66	30,386,	91,158,	3,408,	Grease
Spain	'65	22,055,	74,433,	6,202,	"
Italy	'67	11,040,	24,840,	1,035,	{ No imports to United Kingdom
Austria	'64	16,573,	31,075,	2,331,	{ Very trifling im- ports
Switzerland	'66	445,	1,336,	50,	{ No imports to United Kingdom
Greece	'67	2,540,	7,618,	222,	
United States*	'67	32,796,	177,000,	14,105,	{ \$75,225,000 cur- rency
		—	1,121,519,	64,611,	

Note.—Allowance for lambs and skins used in Russia, one-third the number of sheep; and for lambs in other countries one-fourth the number of sheep.

* Mr. Wells's report, 1869.

APPENDIX.

TABLE I.—*Estimate of Home-Grown Wool, taking the Average Returns of Sheep One Year old and above, for the Years 1867-69, and the Weights of Fleeces as supplied by Messrs. J. and J. Hubbard, of Bradford.*

Counties.	Sheep.	Weight of Fleeces.	Pounds of Wool. [000's omitted.]	Memoranda.
Bedford.....	564,844	lbs.		
Berks.....		6	3,386,	
Buckingham.....				
Cambridge	215,454	6	1,298,	{ Half-breds, 6 to 7 lbs. Leicesters, 7 " 8 " Downs, 4 " 4½ " All grown in this county
Chester	124,332	4	497,	These are unwashed Several breeds grown here
Cornwall	265,703	7½	1,998,	
Cumberland	350,622	5	1,753,	
Derby	164,460	5½	864,	These are unwashed
Devon	592,157	7½	4,441,	
Dorset	344,211	4½	1,635,	{ Horns, 5½ lbs. Downs, 3½ " Both sorts grown
Durham	140,900	4	564,	
Essex.....	312,945	5	1,565,	{ Kents and half-breds, 5 to 6 lbs. Downs 3 " 4 " Both these breeds grown in this county
Gloucester	296,803	7	2,078,	This is the regular large breed
Hants	406,649	6	2,440,	
Hereford	226,773	5½	1,247,	
Hertford	142,771	5	714,	{ Half-breds, 5 to 6 lbs. Downs, 4 " 4½ " Both breeds grown in this country
Huntingdon	100,606	6½	679,	
Kent	721,517	6	4,329,	
Lancaster	197,960	5½	1,089,	
Leicester	297,435	6½	2,008,	
Lincoln	1,005,840	8	8,048,	
Middlesex.....	34,802	5	174,	{ Half-breds, 5½ to 7 lbs. Downs, 4 " 4½ " There is no regular breed peculiar to this county
Monmouth	132,108	2½	390,	A light Welsh class of sheep.

TABLE I.—*Estimate of Home-Grown Wool, &c.—Contd.*

Counties.	Sheep.	Weight of Fleece.	Pounds of Wool. [000's omitted.]	Memoranda.
		lbs.		
Norfolk	480,511	4	1,922,	{ Half-breds, 5 lbs. Down, 3 lbs. to 4 lbs. Both sorts grown Deep staple and bright hair
Northampton	363,519	6	2,181,	
Northumberland ..	572,764	6	3,937,	
Nottingham	189,914	6½	1,187,	
Oxford	229,916	5½	1,265,	{ Half-breds, 6 lbs. Down, 4 to 5½ " Both sorts grown
Rutland.....	70,262	7	492,	
Salop	306,295	5½	1,685,	
Somerset	521,675	7	3,652,	
Stafford.....	207,860	5½	1,195,	{ Half-breds, 6 lbs. Down, 4 to 5½ " Both sorts grown
Suffolk	317,628	4½	1,509,	
Surrey	87,694	4	351,	
Sussex	379,064	4	1,516,	
Warwick	251,676	5½	1,447,	{ Several breeds grown Down
Westmoreland	218,416	5	1,092,	
Wilts	478,237	3½	1,656,	
Worcester.....	166,281	5½	815,	
York, E. Riding	320,225	8½	2,722,	{ Deep staple and bright hair Masham, 5 lbs. Scotch, 4 to 4½ " These also grown here Deep staple and bright hair
„ N. Riding	487,561	5½	2,516,	
„ W. Riding	476,613	5½	2,740,	
Wales	1,733,078	4½	8,232,	
Total	14,442,100	—	83,384,	{ General average, as per Mr. Bottomley's estimate, Octo- ber, 1870
Ireland	3,098,947	6	18,594,	
Scotland	4,606,315	4½	21,875,	
Isle of Man and Channel Is-lands	43,442	{ about 5 }	217,	
Total in United Kingdom	22,189,804	—	124,020,	

Note.—Allowance should be made in all wools unwashed, or in the grease, of one-third in weight for clean wool.

TABLE II.—Imports of Foreign and

[000's omitted.]

Years.	Total Quantities.	Whereof came from						
		New South Wales.	Victoria.	Tasmania.	South Australia.	Western Australia.	New Zealand.	Total Australia and New Zealand.
	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.
1796	3,484,	—	—	—	—	—	—	—
'97	4,661,	—	—	—	—	—	—	—
'98	2,659,	—	—	—	—	—	—	—
'99	5,125,	—	—	—	—	—	—	—
1800	8,608,	—	—	—	—	—	—	—
1801	7,361,	—	—	—	—	—	—	—
'02	7,622,	—	—	—	—	—	—	—
'03	5,890,	—	—	—	—	—	—	—
'04	7,909,	—	—	—	—	—	—	—
'05	8,057,	—	—	—	—	—	—	—
1806	6,757,	—	—	—	—	—	—	—
'07	11,473,	—	—	—	—	—	—	—
'08	2,279,	—	—	—	—	—	—	—
'09	6,753,	—	—	—	—	—	—	—
'10	10,873,	—	—	—	—	—	—	—
1811	4,730,	—	—	—	—	—	—	—
'12	6,979,	—	—	—	—	—	—	—
'13	—	—	—	—	—	—	—	—
'14	15,479,	—	—	—	—	—	—	—
'15	13,634,	—	—	—	—	—	—	—
1816	7,516,	—	—	—	—	—	—	14
'17	14,051,	—	—	—	—	—	—	—
'18	24,718,	—	—	—	—	—	—	87,
'19	13,736,	—	—	—	—	—	—	71,
'20	9,776,	—	—	—	—	—	—	99,
1821	16,622,	—	—	—	—	—	—	175,
'22	19,058,	—	—	—	—	—	—	133,
'23	19,367,	—	—	—	—	—	—	477,
'24	22,564,	—	—	—	—	—	—	383,
'25	43,817,	—	—	—	—	—	—	324,
1826	15,989,	—	—	—	—	—	—	1,106,
'27	29,142,	321,	—	192,	—	—	—	513,
'28	30,247,	963,	—	606,	—	—	—	1,574,
'29	21,526,	913,	—	926,	—	—	—	1,839,
'30	32,313,	973,	—	994,	—	—	—	1,967,
1831	31,652,	1,134,	—	1,359,	—	—	—	2,493,
'32	28,129,	1,426,	—	951,	—	—	—	2,377,
'33	38,046,	1,970,	—	1,547,	—	—	—	3,517,
'34	46,491,	2,226,	—	1,332,	—	1,	—	3,568,
'35	42,175,	2,688,	—	1,522,	—	—	—	4,210,

lonial (Sheep and Lambs) Wool.

[000's omitted.]

Age and Natal.	Whereof came from								Years.
	Spain.	Germany.	Russia.	Other European Countries.	River Plate.	United States.	India.	Other Parts.	
lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	
—	3,339,	14,	—	81,				50,	1796
—	4,355,	143,	—	147,				16,	'97
—	2,043,	218,	—	134,				264,	'98
—	2,940,	820,	—	1,247,				117,	'99
—	6,063,	421,	—	1,925,				197,	1800
—	5,395,	196,	31,	1,181,	Returned	—	—	558,	1801
—	5,646,	426,	—	978,		—	—	573,	'02
—	4,351,	241,	—	1,087,		—	—	210,	'03
—	6,989,	30,	—	796,	with	—	—	94,	'04
—	6,859,	62,	—	748,		—	—	388,	'05
—	5,444,	715,	8,	400,	South	—	—	191,	1806
—	10,291,	192,	5,	888,		—	—	96,	'07
—	1,962,	8,	—	179,		—	—	30,	'08
—	4,284,	444,	1,	1,804,	America.	—	—	219,	'09
—	5,952,	834,	32,	3,879,		—	—	175,	'10
—	2,581,	30,	—	2,014,		—	—	104,	1811
—	1,666,	—	—	5,245,		35,	—	33,	'12
were destroyed	6,723,	3,581,	687,	4,413,		—	—	42,	'13
23,	6,930,	3,243,	298,	3,013,	41,	9,	—	4,	'14
10,	2,959,	2,833,	229,	1,211,	206,	43,	—	12,	1816
12,	6,282,	4,924,	14,	2,628,	23,	149,	1,	20,	'17
14,	8,761,	8,674,	772,	5,838,	300,	269,	2,	1,	'18
18,	4,999,	4,163,	459,	3,111,	876,	24,	—	16,	'19
14,	3,536,	5,221,	76,	732,	69,	1,	8,	20,	'20
12,	6,969,	8,645,	67,	712,	8,	—	18,	15,	1821
40,	5,994,	11,143,	181,	1,517,	—	4,	9,	22,	'22
24,	4,319,	12,580,	198,	1,767,	—	—	—	2,	'23
25,	5,021,	15,433,	261,	1,429,	3,	1,	7,	2,	'24
28,	8,206,	28,931,	1,992,	3,910,	331,	80,	—	15,	'25
4,	1,619,	10,599,	697,	1,307,	205,	5,	128,	318,	1826
44,	3,898,	22,019,	607,	1,775,	—	87,	2,	197,	'27
29,	3,809,	22,802,	560,	1,165,	—	2,	—	306,	'28
88,	3,755,	14,960,	154,	287,	159,	25,	—	309,	'29
83,	1,644,	26,787,	203,	1,635,	19,	7,	—	16,	'30
48,	3,475,	23,046,	264,	2,294,	12,	16,	—	4,	1831
83,	2,627,	20,666,	856,	804,	30,	628,	—	57,	'32
93,	3,339,	25,676,	1,381,	3,370,	207,	335,	—	123,	'33
142,	2,344,	22,942,	3,108,	10,914,	1,099,	2,048,	68,	268,	'34
192,	1,603,	25,054,	4,025,	5,356,	963,	237,	296,	1,240,	'35

TABLE II.—Imports of Foreign and

[000's omitted.]

Years.	Total Quantities.	Whereof came from							
		New South Wales.	Victoria.	Tasmania.	South Australia.	Western Australia.	New Zealand.	Queensland.	Total Australia and New Zealand.
	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.
1836...	64,240,	3,008,	—	1,984,	—	5,	—	—	4,997,
'37...	48,380,	4,607,	—	2,454,	—	—	—	—	7,060,
'38...	52,606,	5,323,	—	2,491,	—	23,	—	—	7,887,
'39...	57,396,	6,895,	—	3,213,	—	21,	—	—	10,130,
'40...	49,448,	7,000,	—	2,626,	51,	43,	—	—	9,721,
1841...	56,180,	7,993,	—	3,598,	760,	49,	—	—	12,333,
'42...	45,882,	8,726,	—	3,492,	690,	52,	—	—	12,960,
'43...	47,785,	11,943,	—	3,993,	1,388,	111,	—	—	17,433,
'44...	65,070,	12,406,	—	4,412,	662,	109,	12,	—	17,602,
'45...	75,552,	18,651,	—	4,289,	1,200,	2,	26,	—	24,177,
1846...	66,255,	10,951,	3,823,	4,866,	1,678,	443,	30,	—	21,789,
'47...	63,593,	11,739,	7,803,	4,621,	1,655,	189,	50,	—	26,067,
'48...	69,433,	13,051,	9,429,	4,507,	2,752,	191,	105,	—	30,035,
'49...	78,111,	14,269,	12,697,	4,999,	3,666,	144,	104,	—	35,879,
'50...	74,327,	15,580,	14,331,	5,137,	3,225,	317,	428,	—	39,018,
1851...	83,311,	14,772,	17,270,	5,198,	3,393,	369,	809,	—	41,810,
'52...	93,761,	15,671,	17,646,	5,148,	3,922,	328,	482,	—	43,197,
'53...	117,248,	16,675,	20,823,	5,515,	3,340,	24,	699,	—	47,076,
'54...	104,854,	17,384,	19,769,	5,179,	4,396,	462,	299,	—	47,490,
'55...	97,854,	16,144,	21,226,	5,419,	5,590,	406,	358,	—	49,142,
1856...	113,237,	20,439,	18,837,	5,268,	5,977,	465,	1,064,	—	52,053,
'57...	127,391,	15,820,	19,239,	4,981,	7,138,	422,	1,609,	—	49,210,
'58...	124,051,	17,120,	19,074,	4,282,	7,464,	465,	2,699,	—	51,106,
'59...	130,783,	15,160,	20,399,	4,771,	8,339,	970,	4,061,	—	53,700,
'60...	145,502,	14,956,	24,209,	4,416,	9,769,	747,	5,068,	—	59,166,
1861...	144,067,	18,068,	24,560,	4,417,	11,996,	928,	7,198,	1,318,	68,506,
'62...	168,837,	19,072,	25,580,	4,346,	12,070,	653,	8,050,	1,570,	71,339,
'63...	173,975,	18,377,	26,343,	3,759,	15,116,	627,	10,328,	2,623,	77,173,
'64...	203,809,	24,415,	37,369,	4,828,	14,541,	740,	13,811,	3,323,	99,087,
'65...	209,413,	26,028,	43,603,	4,485,	16,259,	870,	16,958,	1,530,	109,794,
1866...	235,741,	25,530,	46,628,	4,128,	13,288,	916,	19,929,	3,354,	113,773,
'67...	230,224,	32,080,	51,178,	4,269,	16,018,	957,	23,733,	4,873,	133,108,
'68...	250,929,	35,504,	63,777,	4,872,	20,414,	1,194,	25,237,	4,748,	155,745,
'69...	255,161,	34,789,	64,031,	4,298,	23,249,	1,358,	24,871,	5,881,	158,478,

Note.—Until 1843, China is included with East India.

Colonial (Sheep and Lambs) Wool—Contd.

[000's omitted.]

Whereof came from									Years.
Cape and Natal.	Spain.	Germany.	Russia.	Other European Countries.	River Plate.	United States.	India.	Other Parts.	
lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	
332,	2,818,	32,028,	5,415,	13,250,	1,073,	633,	1,086,	2,607,	1836
468,	2,245,	19,898,	6,115,	5,762,	2,208,	237,	1,881,	2,505,	'37
423,	1,815,	27,687,	3,769,	4,529,	1,110,	58,	1,899,	3,479,	'38
626,	2,410,	23,902,	7,967,	5,894,	237,	149,	2,104,	3,978,	'39
752,	1,267,	21,837,	4,519,	3,998,	617,	115,	2,441,	4,181,	'40
1,060,	1,088,	21,124,	4,112,	3,562,	5,106,	59,	3,009,	4,621,	1841
1,266,	670,	15,784,	4,569,	2,536,	1,460,	561,	4,246,	1,830,	'42
1,728,	597,	16,939,	3,512,	2,431,	1,880,	137,	1,916,	1,413,	'43
2,197,	919,	22,119,	5,402,	8,447,	2,186,	29,	2,766,	3,410,	'44
3,518,	1,074,	18,681,	8,709,	8,686,	2,934,	835,	3,976,	2,966,	'45
2,958,	1,020,	16,233,	4,766,	6,624,	314,	901,	4,571,	6,077,	1846
3,477,	424,	12,725,	2,950,	4,934,	2,364,	481,	3,063,	6,116,	'47
3,497,	107,	14,500,	2,349,	4,604,	4,258,	56,	5,997,	3,940,	'48
5,377,	128,	12,767,	5,765,	5,650,	2,568,	161,	4,182,	2,634,	'49
5,710,	441,	9,196,	3,556,	7,569,	1,862,	13,	3,473,	3,489,	'50
5,817,	383,	8,261,	5,896,	8,323,	853,	594,	4,550,	6,820,	1851
6,389,	233,	12,819,	5,354,	8,157,	2,757,	167,	7,831,	6,805,	'52
7,221,	—	11,585,	9,075,	12,699,	5,350,	—	12,401,	11,840,	'53
8,224,	—	11,449,	3,754,	8,997,	3,159,	—	14,965,	6,616,	'54
11,076,	69,	6,125,	203,	7,340,	3,668,	483,	14,284,	5,463,	'55
14,305,	55,	8,640,	2,562,	11,378,	2,568,	—	15,386,	6,289,	1856
14,288,	397,	5,955,	10,308,	13,060,	3,768,	3,782,	19,371,	7,251,	'57
16,598,	111,	11,009,	6,647,	10,188,	5,235,	952,	17,334,	4,873,	'58
14,269,	154,	12,411,	10,978,	15,577,	3,485,	—	14,363,	5,845,	'59
16,574,	1,000,	9,954,	8,730,	18,551,	2,875,	1,091,	20,214,	7,345,	'60
18,076,	631,	3,351,	12,619,	8,145,	5,625,	1,096,	19,161,	6,257,	1861
18,931,	396,	8,717,	18,187,	17,209,	6,050,	192,	17,959,	9,857,	'62
20,167,	256,	8,801,	13,483,	12,893,	10,457,	678,	20,670,	9,397,	'63
19,881,	712,	9,628,	15,400,	17,609,	11,303,	891,	20,425,	8,921,	'64
29,220,	116,	7,138,	15,050,	13,420,	10,383,	45,	17,105,	7,202,	'65
29,249,	123,	11,402,	16,908,	15,160,	11,747,	1,256,	25,680,	10,443,	1866
36,127,	494,	4,185,	8,065,	9,317,	11,084,	656,	15,235,	11,953,	'67
35,994,	663,	5,812,	8,273,	8,059,	8,368,	827,	17,602,	9,586,	'68
34,308,	272,	7,309,	7,423,	10,368,	8,027,	59,	18,797,	10,120,	'69

Upaca, mohair, &c., is included before 1852, but not subsequently.

TABLE III.—Exports from the United Kingdom of (Sheep and

Years.	Total.		Russia.		Sweden.		Germany and Holland.	
	British.	Colonial and Foreign.	British.	Colonial and Foreign.	British.	Colonial and Foreign.	British.	Colonial and Foreign.
1820.....	lbs. 35,	lbs. 65,	lbs. —	lbs. —	lbs. —	lbs. —	lbs. —	lbs. —
1821.....	34,	291,	—	—	—	—	—	10,
'22.....	33,	234,	—	—	—	—	—	6,
'23.....	29,	201,	—	—	—	—	—	5,
'24.....	54,	420,	—	—	—	—	—	4,
'25.....	112,	678,	—	—	—	—	5,	—
1826.....	143,	889,	—	1,	—	—	—	15,
'27.....	279,	760,	—	—	—	—	2,	3,
'28.....	1,669,	872,	1,	—	—	—	—	1,
'29.....	1,332,	407,	—	—	—	—	2,	29,
'30.....	2,951,	659,	—	—	—	—	127,	212,
1831.....	3,494,	1,026,	—	—	—	—	75,	25,
'32.....	4,200,	555,	—	3,	—	—	32,	27,
'33.....	4,992,	443,	—	—	—	—	8,	17,
'34.....	2,279,	807,	—	6,	—	5,	1,	2,
'35.....	4,643,	4,102,	—	—	—	17,	27,	89,
1836.....	3,942,	614,	11,	—	—	—	22,	70,
'37.....	2,647,	2,831,	6,	—	—	—	64,	181,
'38.....	5,851,	1,898,	4,	—	—	—	23,	61,
'39.....	4,604,	695,	5,	—	—	—	40,	127,
'40.....	4,810,	1,015,	—	—	—	2,	34,	104,
1841.....	8,471,	2,554,	—	—	—	—	13,	87,
'42.....	8,579,	3,638,	—	—	—	—	33,	311,
'43.....	8,180,	2,735,	—	—	—	1,	106,	67,
'44.....	8,947,	1,925,	—	17,	—	—	255,	91,
'45.....	9,059,	2,609,	—	—	—	—	136,	269,
1846.....	5,852,	3,012,	—	—	—	—	236,	198,
'47.....	5,551,	4,810,	—	—	4	4,	373,	469,
'48.....	3,979,	6,540,	—	—	—	62,	516,	709,
'49.....	11,200,	12,324,	—	9,	—	92,	623,	941,
'50.....	12,002,	14,389,	—	5,	—	168,	904,	2,381,
1851.....	8,573,	13,730,	—	28,	1,	286,	801,	1,907,
'52.....	13,919,	11,317,	—	69,	1,	105,	856,	873,
'53.....	6,784,	11,697,	—	—	—	—	996,	1,208,
'54.....	12,901,	24,467,	—	—	—	—	1,304,	3,892,
'55.....	16,192,	29,412,	—	—	—	305,	1,520,	8,371,
1856.....	14,379,	26,598,	—	—	—	—	1,442,	5,846,
'57.....	15,144,	36,356,	—	—	—	270,	1,314,	7,153,
'58.....	13,456,	26,587,	11,	113,	—	—	1,142,	1,911,
'59.....	9,054,	28,830,	38,	—	2,	346,	1,432,	2,002,
'60.....	11,253,	30,735,	14,	76,	25,	493,	2,482,	3,032,
1861.....	15,715,	54,325,	187,	88,	26,	956,	1,964,	5,242,
'62.....	10,200,	43,051,	203,	15,	62,	903,	1,913,	4,056,
'63.....	8,230,	63,927,	414,	—	44,	1,063,	1,799,	3,666,
'64.....	7,320,	55,865,	204,	—	40,	618,	2,483,	2,620,
'65.....	9,057,	82,444,	245,	310,	89,	1,191,	3,096,	7,679,
1866.....	9,733,	66,568,	94,	1,191,	—	—	2,508,	4,733,
'67.....	8,862,	90,830,	282,	—	—	2,355,	3,042,	12,876,
'68.....	9,511,	105,066,	387,	391,	84,	776,	2,633,	15,721,
'69.....	12,410,	116,589,	—	924,	—	848,	2,568,	16,887,

Note.—Holland is included with Belgium from

Lambs) Wool to the following Countries. [000's omitted.]

Belgium.		France.		Spain.		United States.		Other Countries.		Years.
British.	Colonial and Foreign.	British.	Colonial and Foreign.	British.	Colonial and Foreign.	British.	Colonial and Foreign.	British.	Colonial and Foreign.	
lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	
—	40,	—	1,	—	—	—	17,	35,	7,	1820
—	45,	—	2,	—	1,	—	229,	34,	4,	1821
—	4,	—	68,	—	—	—	125,	33,	31,	'22
—	90,	—	20,	—	—	—	26,	29,	60,	'23
1,	9,	4,	8,	—	4,	13,	377,	35,	17,	'24
37,	266,	15,	22,	—	1,	23,	385,	33,	3,	'25
12,	319,	95,	251,	—	—	11,	297,	25,	6,	1826
8,	44,	254,	3,	—	—	—	703,	13,	6,	'27
44,	42,	1,391,	72,	—	—	219,	756,	13,	—	'28
528,	83,	777,	192,	—	—	1,	99,	22,	48,	'29
1,319,	5,	1,276,	—	—	—	210,	426,	18,	6,	'30
1,750,	187,	431,	—	—	—	1,219,	792,	18,	22,	1831
3,417,	436,	736,	68,	—	—	1,	16,	13,	5,	'32
3,447,	272,	1,424,	89,	—	5,	105,	56,	7,	5,	'33
1,364,	125,	909,	242,	—	—	—	396,	4,	32,	'34
3,076,	206,	1,521,	513,	—	—	10,	3,199,	8,	79,	'35
2,282,	41,	1,522,	44,	—	—	99,	448,	6,	11,	1836
1,942,	1,175,	599,	1,018,	—	—	33,	372,	2,	85,	'37
4,264,	1,225,	1,553,	450,	—	—	1,	145,	2,	17,	'38
3,626,	275,	876,	64,	—	—	20,	224,	37,	5,	'39
4,108,	558,	665,	181,	—	—	—	169,	4,	2,	'40
7,544,	1,095,	895,	846,	—	—	9,	520,	10,	6,	1841
7,818,	2,697,	717,	419,	—	—	4,	198,	6,	13,	'42
6,302,	2,429,	1,678,	135,	—	—	89,	90,	4,	13,	'43
6,863,	1,204,	1,686,	46,	—	—	140,	566,	2,	—	'44
4,818,	2,147,	4,089,	65,	—	—	9,	127,	6,	1,	'45
1,519,	2,562,	4,073,	82,	—	—	20,	151,	3,	18,	1846
2,478,	3,374,	2,665,	130,	—	—	29,	823,	1,	10,	'47
1,572,	4,318,	1,882,	283,	—	2,	8,	1,159,	—	7,	'48
2,066,	9,317,	8,483,	718,	—	17,	17,	1,218,	6,	13,	'49
2,175,	6,906,	8,291,	1,230,	1,	—	627,	3,537,	3,	161,	'50
1,760,	7,735,	5,210,	1,497,	—	6,	775,	2,030,	25,	241,	1851
3,084,	6,891,	9,292,	1,387,	—	—	668,	1,716,	22,	276,	'52
1,677,	7,232,	3,212,	1,662,	—	—	825,	1,338,	24,	256,	'53
1,856,	10,318,	9,510,	8,489,	—	—	189,	1,459,	43,	309,	'54
1,731,	9,517,	12,774,	10,201,	—	—	122,	532,	44,	487,	'55
872,	7,822,	12,031,	12,204,	—	—	9,	250,	25,	475,	1856
1,242,	9,449,	11,314,	16,072,	—	—	1,160,	3,054,	114,	358,	'57
1,136,	9,866,	10,790,	11,657,	—	—	222,	2,397,	156,	644,	'58
821,	7,871,	6,170,	12,215,	—	—	464,	5,967,	137,	430,	'59
757,	8,077,	7,605,	15,718,	—	—	192,	2,841,	178,	498,	'60
1,198,	15,197,	10,605,	22,013,	—	—	1,521,	10,040,	214,	789,	1861
763,	11,287,	5,133,	19,269,	—	—	1,833,	11,578,	292,	942,	'62
801,	9,613,	4,436,	31,537,	27,	—	646,	17,041,	64,	1,007,	'63
670,	9,149,	3,585,	38,132,	—	—	204,	4,211,	101,	1,134,	'64
2,035,	15,202,	3,249,	50,129,	—	—	352,	7,344,	41,	588,	'65
684,	8,118,	6,189,	47,343,	—	—	181,	4,520,	82,	663,	1866
1,080,	19,124,	4,195,	51,697,	—	—	—	3,941,	264,	838,	'67
829,	23,326,	4,614,	59,612,	61,	—	859,	4,287,	43,	953,	'68
1,025,	24,294,	4,987,	65,191,	54,	—	3,583,	6,430,	193,	2,015,	'69

1820-34. Alpaca is included in this table until 1852.

TABLE IV.—*Imports of Alpaca, Llama, Vicuna, and Goats Wool.*

[000's omitted.]

Years.	Chili.	Peru.	Turkey.	Other Parts.	Total.	Value.
	lbs.	lbs.	lbs.	lbs.	lbs.	£
1853	140,	2,009,	2,917,	335,	5,400,	—
'54	16,	1,249,	1,189,	149,	2,603,	255
'55	158,	1,289,	2,871,	57,	4,375,	471
1856	63,	2,856,	2,575,	393,	5,887,	718
'57	98,	2,235,	2,810,	470,	5,614,	745
'58	—	2,575,	3,704,	199,	6,478,	893
'59	—	2,457,	2,253,	293,	5,003,	654
'60	520,	2,334,	2,512,	350,	5,716,	751
1861	310,	2,791,	3,015,	325,	6,441,	809
'62	9,	2,675,	3,317,	1,152,	7,154,	1,135
'63	—	2,773,	2,129,	1,935,	6,837,	922
'64	319,	1,620,	3,937,	1,525,	7,401,	991
'65	308,	2,385,	5,056,	755,	8,196,	1,240
1866	—	3,355,	4,201,	454,	8,010,	1,337
'67	105,	3,166,	2,421,	435,	6,127,	764
'68	110,	1,654,	6,612,	504,	8,882,	1,342
'69	211,	2,979,	4,174,	421,	7,786,	1,177

TABLE V.—*American Tariffs.*

The following were the rates of duty on all descriptions of wool under the Tariff Act of 30th June, 1864, viz. :—

Of the value at the last port, or place of export, of 12 c. per lb. or less, 3 c. per lb. Exceeding 12 c., and not exceeding 24 c., 6 c. per lb.

„ 24 c., „ 32 c., 10 c. „ and 10 per cent. *ad valorem*.

„ 32 c., 12 c. per lb., and 10 per cent. *ad valorem*.

When imported scoured, three times the amount of the above duties.

According to the law passed 2nd March, 1867, the duty on wool imported in “the ordinary condition as now and heretofore “practised” is as follows, viz. :—

CLASS 1.—*Clothing Wools.*

Unwashed, costing 32 c. or less per lb.	10 c. per lb. and 11 per ct. <i>ad val.</i>
„ „ more than 32 c. per lb. 12	„ 10 „
Washed, „ 32 c. or less per lb.	20 „ 22 „
„ „ more than 32 c. per lb. 24	„ 20 „
Scoured, „ 32 c. or less per lb.	30 „ 33 „
„ „ more than 32 c. per lb. 36	„ 30 „

CLASS 2.—*Combing Wools.*

Unwashed and washed, costing 32 c. or less per lb. }	10 c. per lb. and 11 per ct. <i>ad val.</i>
Unwashed and washed, costing more than 32 c. per lb. }	12 „ 10 „
Scoured, costing 32 c. or less per lb.	30 „ 33 „
„ more than 32 c. per lb.	36 „ 30 „

CLASS 3.—*Carpet Wools and other Similar Wools.*

Unwashed and washed, costing 12 c. or less per lb.	3 c. per lb.
„ „ costing more than 12 c. per lb.	6 „
Scoured, costing 12 c. or less per lb.	9 „
„ more than 12 c. per lb.	18 „

Skins with wool on 30 per cent. *ad valorem*.

Woollen rags, shoddy, mungo, flocks and waste, 12 c. per lb.

TABLE VI.—Public Sales of Colonial Wool held in London.

Series Commenced.	Ended.	Number of Sale Days.	Australian.	Cape of Good Hope.	Total.	Yearly Number of Bales.
1839.	1839.		Bales.	Bales.	Bales.	
Feb.	—	}	No particulars of these series.			} 26,987
May	—					
3rd July	10th July		6	7,279	946	
21st Aug.	29th Aug.	8	10,055	517	10,572	
17th Oct.	24th Oct.	6	8,100	90	8,190	
1840.	1840.					
30th Jan.	8th Feb.	9	6,875	798	7,673	} 44,609
11th June	15th June	4	3,818	1,011	4,829	
30th July	10th Aug.	11	12,355	209	12,564	
2nd Oct.	9th Oct.	7	8,424	1,206	9,630	
3rd Dec.	15th Dec.	12	9,047	866	9,913	
1841.	1841.					
10th March	15th Mar.	5	2,922	501	3,423	} 37,700
5th May	8th May	3	2,824	1,078	3,902	
17th Aug.	3rd Sept.	16	19,310	945	20,255	
4th Nov.	12th Nov.	8	8,501	1,619	10,120	
1842.	1842.					
27th Jan.	2nd Feb.	6	6,539	217	6,756	} 44,394
24th April	26th April	2	2,854	839	3,693	
15th June	20th June	5	4,600	917	5,517	
13th Sept.	24th Sept.	11	12,685	1,121	13,806	
24th Nov.	7th Dec.	12	12,421	2,201	14,622	
1843.	1843.					
16th Feb.	23rd Feb.	7	5,848	396	6,244	} 66,880
25th April	28th April	4	3,909	1,362	5,271	
13th June	26th June	13	13,265	1,628	14,893	
8th Aug.	25th Aug.	16	20,529	997	21,526	
19th Oct.	3rd Nov.	14	16,134	2,812	18,946	
1844.	1844.					
1st Feb.	7th Feb.	6	6,711	992	7,703	} 21,367
18th April	20th April	3	2,935	465	3,400	
5th June	14th June	9	8,679	1,585	10,264	
Aug.	—	}	No particulars of these series.			
Nov.	—					
1845.	1845.					
30th Jan.	11th Feb.	11	11,145	2,125	13,270	} 87,943
13th May	28th May	14	12,813	2,932	15,745	
3rd July	26th July	21	27,918	3,201	31,119	
2nd Oct.	24th Oct.	20	24,355	3,454	27,809	
1846.	1846.					
19th Feb.	27th Feb.	8	7,423	2,943	10,366	} 95,317
14th May	30th May	15	15,340	3,599	18,939	
3rd July	25th July	20	26,165	2,135	28,300	
9th Sept.	28th Sept.	17	20,862	3,131	23,993	
25th Nov.	7th Dec.	11	11,112	2,607	13,719	

TABLE VI.—Public Sales of Colonial Wool—Contd.

Series Commenced.	Ended.	Number of Sale Days.	Australian.	Cape of Good Hope.	Total.	Yearly Number of Bales.
1847.	1847.		Bales.	Bales.	Bales.	
18th Feb.	24th Feb.	6	5,884	821	6,705	91,623
6th May	14th May	8	8,683	2,032	10,715	
10th June	1st July	19	24,224	1,714	25,938	
10th Aug.	31st Aug.	19	23,489	2,579	26,068	
21st Oct.	8th Nov.	16	18,210	3,987	22,197	
1848.	1848.					
10th Feb.	1st Mar.	18	19,433	4,379	23,812	124,007
4th May	19th May	14	13,242	2,386	15,628	
22nd June	18th July	23	28,925	1,857	30,782	
24th Aug.	22nd Sept.	26	30,498	3,172	33,670	
16th Nov.	1st Dec.	14	16,905	3,210	20,115	
1849.	1849.					
7th Feb.	24th Feb.	16	20,472	6,180	26,652	161,211
10th May	26th May	15	17,617	5,456	23,073	
3rd July	20th July	24	41,323	1,613	42,936	
13th Sept.	13th Oct.	27	37,782	5,078	42,860	
29th Nov.	15th Dec.	15	20,413	5,277	25,690	
1850.	1850.					
14th Feb.	25th Feb.	10	14,832	3,181	18,013	164,330
2nd May	17th May	14	18,243	3,726	21,969	
13th June	11th July	25	47,377	1,559	48,936	
22nd Aug.	20th Sept.	25	44,604	5,724	50,328	
21st Nov.	7th Dec.	15	16,780	8,304	25,084	
1851.	1851.					
13th Feb.	25th Feb.	11	13,539	3,446	16,985	169,371
15th May	7th June	21	40,990	5,974	46,964	
17th July	16th Aug.	27	57,841	2,807	60,648	
23rd Oct.	14th Nov.	20	37,334	7,440	44,774	
1852.	1852.					
19th Feb.	28th Feb.	9	13,198	4,548	17,746	155,181
20th May	5th June	15	24,297	6,600	30,897	
9th July	6th Aug.	26	53,371	2,095	55,466	
14th Oct.	10th Nov.	24	41,593	9,479	51,072	
1853.	1853.					
10th Feb.	2nd Mar.	18	28,618	5,788	34,406	183,780
19th May	7th June	18	27,264	6,494	33,758	
14th July	13th Aug.	27	55,465	6,084	61,549	
20th Oct.	17th Nov.	25	48,275	5,792	54,067	
1854.	1854.					
9th Feb.	4th Mar.	21	40,193	7,538	47,731	197,536
11th May	1st June	19	35,158	6,279	41,437	
18th July	12th Aug.	27	50,226	5,496	55,722	
19th Oct.	14th Nov.	23	45,764	6,882	52,646	

TABLE VI.—Public Sales of Colonial Wool—Contd.

Series Commenced.	Ended.	Number of Sale Days.	Australian.	Cape of Good Hope.	Total.	Yearly Number of Bales.
1855.	1855.		Bales.	Bales.	Bales.	
15th Feb.	3rd Mar.	15	25,569	7,768	33,337	} 211,251
3rd May	24th June	19	33,447	9,751	43,198	
5th July	9th Aug.	31	69,757	6,389	76,146	
18th Oct.	19th Nov.	27	46,878	11,692	58,570	
1856.	1856.					
14th Feb.	7th Mar.	19	25,427	17,642	43,069	} 226,051
8th May	3rd June	28	43,585	7,942	51,527	
17th July	26th Aug.	34	73,028	6,360	79,388	
6th Nov.	29th Nov.	21	33,867	18,200	52,067	
1857.	1857.					
26th Feb.	17th Mar.	18	22,650	18,744	41,394	} 228,695
30th April....	30th May	28	54,539	7,604	62,143	
16th July	21st Aug.	33	67,853	12,452	80,305	
12th Nov.	4th Dec.	20	28,000	16,853	44,853	
1858.	1858.					
25th Feb.	13th Mar.	14	19,714	16,192	35,906	} 225,863
29th April....	29th May	27	49,375	9,341	58,716	
15th July	24th Aug.	37	67,438	10,105	77,543	
4th Nov.	1st Dec.	25	33,087	20,711	53,798	
1859.	1859.					
24th Feb.	13th Mar.	17	19,085	16,100	35,185	} 233,836
5th May	3rd June	28	56,177	6,153	62,330	
21st July	30th Aug.	35	75,059	14,144	89,203	
10th Nov.	3rd Dec.	21	27,022	20,096	47,118	
1860.	1860.					
1st Mar.	20th Mar.	17	22,869	13,194	36,063	} 238,802
3rd May	1st June	26	59,104	8,847	67,951	
19th July	30th Aug.	37	78,521	10,270	88,791	
15th Nov.	8th Dec.	21	24,766	21,231	45,997	
1861.	1861.					
28th Feb.	28th Mar.	25	40,918	16,352	57,270	} 275,703
9th May	6th June	25	55,337	8,450	63,787	
18th July	27th Aug.	35	75,921	8,909	84,830	
7th Nov.	10th Dec.	29	43,756	26,060	69,816	
1862.	1862.					
27th Feb.	20th Mar.	19	26,906	23,134	50,040	} 323,913
2nd May	6th June	31	83,362	10,712	94,074	
31st July	6th Sept.	33	89,326	15,858	105,184	
14th Nov.	12th Dec.	25	48,193	26,422	74,615	

TABLE VI.—Public Sales of Colonial Wool—Contd.

Series Commenced.	Ended.	Number of Sale Days.	Australian.	Cape of Good Hope.	Total.	Yearly Number of Bales.
1863.	1863.		Bales.	Bales.	Bales.	
26th Feb.	19th Mar.	19	33,151	15,995	49,146	} 320,758
30th April....	3rd June	30	82,628	10,184	92,812	
16th July	21st Aug.	32	95,757	10,676	106,433	
5th Nov.	1st Dec.	23	44,217	28,150	72,367	
1864.	1864.					
3rd March	23rd Mar.	18	35,034	18,958	53,992	} 380,214
5th May	9th June	31	87,216	14,293	101,509	
21st July	31st Aug.	36	125,683	12,797	138,480	
17th Nov.	15th Dec.	25	60,020	26,213	86,233	
1865.	1865.					
2nd March	27th Mar.	22	60,703	23,654	84,357	} 443,243
11th May	24th June	39	137,567	21,985	159,552	
17th Aug.	23rd Sept.	33	113,760	25,302	139,062	
16th Nov.	6th Dec.	18	29,535	30,737	60,272	
1866.	1866.					
1st March	26th Mar.	22	65,729	20,437	86,166	} 458,071
10th May	23rd June	39	140,996	15,569	156,565	
16th Aug.	25th Sept.	35	118,574	19,494	138,068	
15th Nov.	10th Dec.	23	33,323	43,949	77,272	
1867.	1867.					
28th Feb.	30th Mar.	27	84,253	32,421	116,674	} 546,543
16th May	29th June	39	150,039	29,663	179,702	
15th Aug.	21st Sept.	33	120,087	22,944	143,031	
14th Nov.	14th Dec.	27	61,501	45,635	107,136	
1868.	1868.					
27th Feb.	27th Mar.	26	84,909	36,303	121,212	} 656,618
14th May	27th June	39	174,033	32,506	206,544	
18th Aug.	25th Sept.	38	178,915	29,308	208,223	
26th Nov.	21st Dec.	22	76,624	44,015	120,639	
1869.	1869.					
25th Feb.	24th Mar.	24	101,045	33,747	134,792	} 680,540
6th May	19th June	39	188,207	30,299	218,506	
12th Aug.	21st Sept.	36	162,239	32,594	194,833	
11th Nov.	8th Dec.	24	88,087	44,322	132,409	
1870.	1870.					
17th Feb.	5th Mar.	15	55,776	24,965	80,741	} 650,532
7th April....	12th May	29	146,549	16,855	163,404	
16th June	27th July	36	208,993	26,207	235,200	
27th Oct.	29th Nov.	29	127,614	43,573	171,187	

TABLE VII.—Average Prices per Pound of Colonial and of Domestic Wools, per 240 lbs.

Description of Wool.	1839.			1840.			1841.			1842.		
	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.
<i>New South Wales—</i>												
Superior and first fleeces.....	2	1	—	2	1	11	—	2	1	10	—	2
Medium	1	11	—	2	1	7	—	2	1	5	—	1
Inferior	1	5	—	1	4	—	1	7	1	3	—	1
Pieces	1	2	—	1	0	9	—	1	0	9	—	1
Grease	0	8	—	1	0	8	—	1	0	8	—	1
<i>Victoria (Port Phillip)—</i>												
Superior and first fleeces.....	—	—	—	—	—	—	1	10	—	2	—	2
Medium	1	4	—	2	0	1	5	—	1	11	—	1
Inferior	—	—	—	—	—	—	1	3	—	1	6	—
Pieces	—	—	—	—	—	—	—	—	—	—	—	—
Grease	—	—	—	—	—	—	—	—	—	—	—	—
<i>South Australia (Adelaide)—</i>												
Superior and first fleeces.....	—	—	—	—	—	—	—	—	—	—	—	—
Medium	1	2	—	1	7	1	1	—	1	4	1	1
Inferior	—	—	—	—	—	0	10	—	0	11	—	—
Pieces and locks.....	—	—	—	—	—	—	—	—	—	—	—	—
Grease	—	—	—	—	—	0	6	—	0	8	—	—
<i>Swan River—</i>												
Medium	—	—	—	—	—	1	1	—	1	6	1	1
<i>Van Dieman's Land—</i>												
Superior	2	0	—	2	5	2	0	—	2	4	1	10
Medium	1	8	—	1	11	1	5	—	1	8	1	4
Inferior	1	4	—	1	7	1	1	—	1	5	1	2
Grease	0	8	—	1	0	0	8	—	1	0	0	7
<i>New Zealand—</i>												
Superior and medium } (a few bales)	1	9	—	2	0	—	—	—	—	—	—	—
Inferior	—	—	—	—	—	—	—	—	—	—	—	—
<i>Cape of Good Hope—</i>												
Superior	1	8	—	2	0	1	5	—	1	9	1	4
Fair, average, good.....	1	2	—	1	6	1	0	—	1	5	1	2
Grease	0	6	—	0	9	0	6	—	0	9	0	7
Per pack of 240 lbs.												
	1837.		1838.		1839.		1840.		1841.		1842.	
<i>Domestic Wools—</i>	£	s.	£	s.	£	s.	£	s.	£	s.	£	s.
Lincoln middle wethers....	18	10	14	10	16	10	13	10	18	—	12	—
Down ewes	—	—	—	—	—	—	14	15—15	13—13	14	12	—

TABLE VII.—Average Prices per Pound of Colonial and of Domestic Wools—Contd.

Description of Wool.	1843.		1844.		1845.		1846.	
	s.	d.	s.	d.	s.	d.	s.	d.
<i>New South Wales—</i>								
Superior and first fleece	1	8—1 11	1	6—2 0	2	1—2 5	1	10—2 3
Medium	1	5—1 8	1	5—1 9	1	8½—1 11½	1	6—1 9
Inferior	1	1—1 4	1	2—1 4	1	6—1 8	1	1—1 5
Pieces and locks	0	10—1 4	1	0—1 5	1	1½—1 7	0	10—1 10
Grease	0	8—1 0	0	8—0 11½	0	10—1 3	0	10—1 10
<i>Victoria (Port Phillip)—</i>								
Superior and first fleece	—	—	—	—	1	10—2 1½	1	6—1 8
Medium	1	0—1 7	—	—	1	6½—1 9	1	4—1 7
Inferior	—	—	—	—	1	4—1 6	1	1—1 4
Pieces and locks	—	—	—	—	1	0—1 6	0	9—1 4½
Grease	—	—	—	—	0	9—1 1	0	7½—0 11½
<i>South Australian—</i>								
First fleece	—	—	—	—	1	6—1 10½	—	—
Medium	1	0—1 4½	1	0—1 7	1	5½—1 8	1	5—1 6
Inferior	—	—	—	—	1	2½—1 5½	1	2—1 2½
Pieces and locks	—	—	1	0—1 4	1	0—1 3	0	11—1 1½
Grease	—	—	0	8—1 1	0	10—1 1	0	7—0 9
<i>Swan River—</i>								
Superior first fleece	0	11—1 2	0	11—1 2	1	6½—1 10	1	3½—1 6
Inferior	—	—	—	—	—	—	0	11½—1 2
Pieces and locks	—	—	—	—	—	—	0	9—1 0
Grease	—	—	—	—	0	8—0 10	0	7—0 9
<i>Van Dieman's Land—</i>								
Superior first fleece	1	6—1 10	1	4—1 9	1	8½—2 1	1	7—1 9
Medium	1	4—1 6	1	3—1 7	1	6—1 10	1	4—1 6
Inferior	1	0—1 2	0	11—1 2	1	4—1 6	1	1—1 4
Pieces and locks	—	—	—	—	1	0—1 5	0	8—1 2
Grease	0	8—0 10	0	7—0 9	0	9—1 0½	0	7—0 10½
<i>New Zealand—</i>								
Superior first fleece	—	—	—	—	—	—	—	—
Medium (fair, good)	—	—	—	—	1	4—1 7½	0	9½—1 0½
Inferior	—	—	—	—	—	—	—	—
Pieces and locks	—	—	—	—	—	—	—	—
Grease	—	—	—	—	—	—	—	—
<i>Cape of Good Hope (including Eastern and Western Provinces and Natal—</i>								
Snow white	—	—	—	—	—	—	—	—
Scoured	1	5—1 9	1	5—1 10	1	6½—1 10	1	6—1 11
Average fleece	1	2—1 5	1	3—1 7	1	3—1 6	1	4½—1 8
Grease	0	6½—0 10	0	6—0 10	0	8½—0 11½	0	9—1 1
Per Pack of 240 lbs.								
<i>Domestic Wools—</i>	£	s.	£	s.	£	s.	£	s.
Lincoln middle wethers	11	0	—	—	11	0—11 5	18	10
Down ewes and "	11	0—11 5	—	—	18	0—12 10	18	10
							12	7 6
							£13—£13 5s.	

TABLE VII.—Average Prices per Pound of Colonial and of Domestic Wools—Contd.

Description of Wool.	1847.		1848.		1849.		1850.	
	s.	d.	s.	d.	s.	d.	s.	d.
<i>New South Wales</i> —								
Superior and first fleece	1	9 — 2	1	6 — 1	1	8 — 2	1	3 — 2
Medium	1	4 — 1	7	1 2 — 1	5	1 3 — 1	7	1 4 — 1
Inferior	0	11 — 1	2	1 0 — 1	3	1 0 — 1	3	1 1 — 1
Pieces and locks	0	7 — 1	4	0 6½ — 0	11½	0 8 — 1	3	0 10 — 1
Grease	0	6 — 0	10	0 5 — 0	8	0 7 — 0	11	0 7½ — 0
<i>Victoria (Port Phillip)</i> —								
Superior and first fleece	1	6 — 1	10	1 4 — 1	8	1 6 — 1	9	1 7 — 1
Medium	1	2 — 1	5	1 1 — 1	5	1 3 — 1	5	1 5 — 1
Inferior	0	11 — 1	2	0 11 — 1	0	0 11 — 1	1	1 2 — 1
Pieces and locks	0	7½ — 1	2	0 6 — 0	11	0 8 — 1	2	0 11 — 1
Grease	0	6 — 0	9	0 6 — 0	8	0 8 — 0	10	0 9 — 1
<i>South Australia</i> —								
First fleece	1	3 — 1	6	—	—	1 3 — 1	4	1 4 — 1
Medium	1	0 — 1	3	0 11 — 1	1	0 11 — 1	2	1 2 — 1
Inferior	0	10 — 1	0	0 9 — 0	10	0 10 — 1	0	1 0 — 1
Pieces and locks	0	7 — 0	9	0 5 — 0	7	0 8 — 1	0	0 9 — 1
Grease	0	6 — 0	9	0 5 — 0	7	0 6 — 0	9	0 7 — 0
<i>Swan River</i> —								
Medium fleece	1	0 — 1	3 {	0 10 — 1	0	1 1 — 1	3	1 1 — 1
Inferior				0 8 — 0	10	—	—	—
Pieces and locks				—	—	—	—	—
Grease	0	7 — 0	9	—	—	—	—	—
<i>Van Dieman's Land</i> —								
Superior first fleece	1	5 — 1	8	1 2 — 1	5	1 4 — 1	8	1 5 — 1
Medium	1	2 — 1	4	1 0 — 1	2	1 2 — 1	3	1 3 — 1
Inferior	0	10½ — 1	1	0 9 — 0	11	1 0 — 1	1	1 1 — 1
Pieces and locks	0	10 — 1	1	0 6 — 0	10	0 9 — 1	0	0 11 — 1
Grease	0	7 — 0	9	0 6 — 0	8	0 7 — 0	10	0 9 — 0
<i>New Zealand</i> —								
First fleece (superior)	—	—	—	—	—	—	—	—
Medium (fair, good)	0	11 — 1	2 {	0 10 — 1	1	1 0 — 1	2	1 1 — 1
Inferior				—	—	—	—	—
Pieces and locks	—	—	—	—	—	—	—	—
Grease	—	—	—	0 8½ —	—	—	—	0 10 — 1
<i>Cape of Good Hope (in-</i> <i>cluding Eastern and West-</i> <i>ern Provinces and Natal)</i> —								
Snow white	—	—	—	—	—	—	—	—
Scoured	1	5 — 1	8	1 1 — 1	4	1 1 — 1	4	1 5 — 1
Average fleece	1	1 — 1	5	0 10 — 1	1	1 0 — 1	2	1 2 — 1
Grease	0	7 — 0	8	0 4 — 0	6	0 6 — 0	9	0 7 — 0
Per Pack of 240 lbs.								
<i>Domestic Wools</i> —	£	s.	£	s.	£	s.	£	s.
Lincoln middle wethers	11	15	10	10 —	9	10	11	10 —
Down ewes and „	12	10	11	0 — 11	10	11	0	11 10 — 12

TABLE VII.—Average Prices per Pound of Colonial and of Domestic Wools—Contd.

Description of Wool.	1851.		1852.		1853.		1854.	
	s.	d.	s.	d.	s.	d.	s.	d.
New South Wales—								
Superior and first fleece	1	7—2 0	1	10—2 2	2	0—2 4	1	11—2 3
Medium	1	5—1 9	1	6—1 9	1	7—1 11	1	5—1 10
Inferior	1	1—1 3	1	4—1 6	1	4—1 6	1	1—1 4
Pieces and locks	0	9—1 3	1	0—1 3	0	11½—1 8	0	9—1 5
Grease	0	7—0 9½	0	8—1 0	0	9—1 1	0	7½—0 11½
Victoria (Port Phillip)—								
Superior and first fleece	1	9—2 1	1	9—2 2	1	11—2 3	1	10—2 1
Medium	1	5—1 8	1	6—1 8	1	8—1 11	1	5—1 9
Inferior	1	2—1 4	1	5—1 6	1	4—1 7	1	1—1 4
Pieces and locks	0	11—1 6	1	2—1 7	0	11½—1 8	0	10—1 6
Grease	0	9—1 0	0	9—1 1	0	9—1 2	0	8—1 1
South Australian—								
First fleece	1	4—1 6	1	7—1 9	1	8—2 0	1	5—1 10
Medium	1	2—1 3	1	5—1 6	1	6—1 9	1	3½—1 8
Inferior	0	11½—1 2	1	2½—1 4	1	2½—1 5	1	0—1 2
Pieces and locks	0	9—1 1	0	11—1 4	1	0—1 6	0	8—1 2
Grease	0	7—0 10	0	7½—0 11½	0	8—1 0	0	7—0 11½
Swan River—								
Medium fleece	1	1—1 4	1	4—1 6	1	1—1 5	1	3—1 7
Inferior	—	—	1	3—1 5	0	11—1 3½	1	0—1 3
Pieces and locks	—	—	0	8—1 0	—	—	—	—
Grease	—	—	0	7—0 10	0	7—0 10	0	7—0 10
Van Dieman's Land—								
Superior first fleece	1	6—1 10	1	9—2 2	1	10—2 2	1	9—2 0
Medium	1	3—1 5	1	6—1 8	1	7½—1 11	1	5—1 8
Inferior	1	0—1 2½	1	4—1 5	1	4—1 6	1	1—1 3
Pieces and locks	0	9—1 4	1	0—1 5	1	0—1 6	0	10—1 4
Grease	0	9—0 11	0	9—1 0	0	10—1 1	0	8—1 0
New Zealand—								
First fleece (superior)	1	6—1 8	—	—	—	—	1	4—1 10
Medium (fair, good) }	1	2—1 4	1	4—1 7	1	3½—1 9	1	3—1 5
Inferior	—	—	0	11—1 5	0	10—0 11	0	9—0 11
Pieces and locks	—	—	0	8—0 11	0	10—1 1	0	8½—1 0
Grease	0	7—1 0	—	—	—	—	—	—
Cape of Good Hope (in- cluding Eastern and West- ern Provinces and Natal)—								
Snow white	—	—	—	—	—	—	—	—
Scoured	1	3—1 5	1	7—1 8½	1	8—1 10	1	5—1 7
Average fleece	1	2—1 4	1	3—1 6	1	4—1 6	1	2—1 5
Grease	0	7—0 9	0	7—0 11	0	7—1 0	0	6—0 11
Per Pack of 240 lbs.								
Domestic Wools—	£	s.	£	s.	£	s.	£	s.
Lincoln middle wethers	12	15	12	5	14	10	16	10
Down ewes and „	12	10	12	0—12 5	15	0—15 10	17	0—17 10

TABLE VII.—Average Prices per Pound of Colonial and of Domestic Wools—Contd.

Description of Wool.	1855.		1856.		1857.		1858.	
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
<i>New South Wales—</i>								
Superior and first fleece	1 11½	2 2½	2 3	— 7	2 5	— 10	2 6	— 10
Medium	1 6	— 11	1 11	— 2	2 1	— 4	2 1	— 4
Inferior	1 3	— 1 6	1 7	— 1 9	1 8	— 11	1 5	— 1 8
Pieces and locks	0 11	— 1 6	1 2	— 1 6	1 5	— 1 7	1 3	— 1 5
Grease	0 8	— 1 0	0 10	— 1 1	0 11	— 1 2	0 11	— 1 2
<i>Victoria (Port Phillip)—</i>								
Superior and first fleece	1 11	— 2 2	2 1	— 2 4	2 4	— 2 6	2 3	— 2 5
Medium	1 6	— 1 8	1 9	— 2 0	1 11	— 2 2	1 8	— 1 11
Inferior	1 2	— 1 5	1 5	— 1 8	1 6	— 1 9	1 7	— 1 9
Pieces and locks	0 11	— 1 6	1 0	— 1 8	1 3	— 1 7	1 0	— 1 3
Grease	0 8	— 1 1	0 10	— 1 2	0 11	— 1 2	0 10	— 1 1
<i>South Australian—</i>								
First fleece	1 7	— 1 9	1 9	— 2 0	1 11	— 2 2	1 11	— 2 2
Medium	1 4	— 1 8	1 8	— 1 11	1 9	— 2 0	1 9	— 2 0
Inferior	1 1	— 1 4	1 5	— 1 7	1 6	— 1 9	1 5	— 1 8
Pieces and locks	0 9	— 1 2	1 0	— 1 5	1 2	— 1 6	1 0	— 1 4
Grease	0 8	— 0 11	0 9½	— 0 11	0 10	— 1 0	0 9	— 1 0
<i>Swan River—</i>								
Medium fleece	1 4	— 1 7	1 7	— 1 10	1 7	— 1 8	1 5	— 1 6
Inferior	1 1	— 1 4	1 4	— 1 7	—	—	—	—
Pieces and locks	1 0	— 1 2	1 1	— 1 3	—	—	—	—
Grease	0 9	— 0 10	0 9	— 0 11	—	—	—	—
<i>Van Dieman's Land—</i>								
Superior first fleece	1 10	— 2 0	2 0	— 2 4	2 3	— 2 5	2 3	— 2 5
Medium	1 6	— 1 9	1 10	— 2 0	2 1	— 2 3	2 0	— 2 2
Inferior	1 2	— 1 5	1 7	— 1 9	1 10	— 2 0	1 10	— 2 0
Pieces and locks	0 10	— 1 4	1 0	— 1 4	1 2	— 1 4	0 11	— 1 2
Grease	0 7	— 1 0	0 9	— 1 0	0 10	— 1 1	0 9½	— 1 0
<i>New Zealand—</i>								
First fleece (superior)	1 5	— 1 10	—	— 2 1	1 10	— 2 1	1 9	— 2 1
Medium (fair, good)	1 3	— 1 6	1 8	— 1 11	1 8	— 1 11		
Inferior	1 1	— 1 3	1 5	— 1 8	1 6	— 1 9	1 4	— 1 8
Pieces and locks	0 9	— 0 11	1 1	— 1 5	1 1	— 1 5	0 11	— 1 3
Grease	0 8	— 0 11	0 10	— 1 0	0 10	— 1 0	0 8	— 0 10
<i>Cape of Good Hope (in-</i> <i>cluding Eastern and West-</i> <i>ern Provinces and Natal)—</i>								
Snow white	—	—	—	—	—	—	—	—
Scoured	1 6	— 1 8	1 8	— 1 10	1 7	— 1 10	1 8	— 1 11
Average fleece	1 3	— 1 5	1 5	— 1 7	1 4	— 1 6	1 4	— 1 7
Grease	0 6½	— 0 11	0 9	— 0 11	0 10	— 1 0	0 8	— 0 11
Per Pack of 240 lbs.								
<i>Domestic Wools—</i>	£ s.	£	£ s.		£ s.		£ s.	
Lincoln middle wethers	12 10	—	13 10		19 0		14 10	
Down ewes and „	12 10	— 18	15 0		18 10		14 10	

TABLE VII.—Average Prices per Pound of Colonial and of Domestic Wools—Contd.

Description of Wool.	1859.		1860.		1861.		1862.	
<i>New South Wales—</i>	<i>s. d. s. d.</i>		<i>s. d. s. d.</i>		<i>s. d. s. d.</i>		<i>s. d. s. d.</i>	
Superior and first fleece	2	3—2 7	2	2—2 9	2	2—2 8	2	2—2 10
Medium	1	11—2 2	1	10—2 1	1	9—2 0	1	10—2 1
Inferior	1	6—1 10	1	7—1 9	1	5—1 8	1	4—1 6
Pieces and locks	1	0—1 10	1	2—1 8	1	0—1 8	0	11—1 8
Grease	0	10—1 2	0	11—1 2	0	9—1 1	0	10—1 2
<i>Victoria (Port Phillip)—</i>								
Superior and first fleece	2	2—2 7	2	2—2 8	2	1—2 6	2	1—2 6
Medium	1	10—2 2	1	11—2 1	1	9—2 0	1	8—1 11
Inferior	1	7—1 10	1	7—1 9	1	6—1 8	1	4—1 7
Pieces and locks	1	0—1 10	1	3—1 8	1	0—1 9	1	1—1 7
Grease	0	11—1 3	1	0—1 4	0	10—1 4	0	10—1 3
<i>South Australian—</i>								
First fleece	1	10—2 1	1	11—2 3	1	9—2 0	—	—
Medium	1	7—1 10	1	9—1 11	1	6—1 9	1	7—1 11
Inferior	1	6—1 7	1	6—1 8	1	4—1 6	1	3—1 7
Pieces and locks	0	9—1 3	1	1—1 6	0	11—1 4	0	11—1 2
Grease	0	8—1 0	0	11—1 3	0	9—1 1	0	7—1 3
<i>Swan River—</i>								
Fine fleece	1	10—2 1	1	11—2 1	1	10—2 0	1	10—2 1
Medium	1	8—1 10	1	8—1 10	1	6—1 9	1	8—1 10
Inferior	1	6—1 8	1	6—1 7	1	4—1 6	1	5—1 7
Pieces and locks	0	11—1 3	1	0—1 3	0	10—1 3	0	9—1 4
Grease	0	10—1 1	0	11—1 2	0	9—1 0	0	9—1 4
<i>Van Dieman's Land—</i>								
Superior first fleece	2	4—2 10	2	2—2 9	2	0—2 6	2	3—2 8
Medium	1	9—2 1	1	10—2 0	1	9—1 11	1	9—2 0
Inferior	1	7—1 10	1	6—1 9	1	3—1 8	1	5—1 8
Pieces and locks	1	2—1 8	1	2—1 6	1	0—1 6	1	0—1 6
Grease	0	10—1 1	0	11—1 2	0	10—1 1	0	9—1 1
<i>New Zealand—</i>								
First fleece (superior)	2	0—2 3	2	0—2 3	1	10—2 2	1	10—2 1
Medium (fair, good)	1	8—1 11	1	9—1 11	1	7—1 9	1	8—1 10
Inferior	1	5—1 8	1	6—1 8	1	4—1 6	1	4—1 6
Pieces and locks	0	11—1 5	1	0—1 6	0	11—1 3	0	10—1 3
Grease	0	10—1 3	1	0—1 4	0	10—1 2	0	11—1 4
<i>Cape of Good Hope (in- cluding Eastern and West- ern Provinces and Natal)—</i>								
Snow white	—	—	—	—	—	—	—	—
Sooured	1	6—2 0	1	6—2 1	1	3—1 9	1	3—1 7
Average fleece	1	5—1 9	1	5—1 9	1	3—1 7	1	2—1 6
Grease	0	10—1 1	0	9—1 0	0	7—0 11	0	7—0 11
Price per Pack of 240 lbs.								
<i>Domestic Wools—</i>	<i>£</i>	<i>£ s.</i>	<i>£ s.</i>	<i>£ s.</i>	<i>£ s.</i>	<i>£ s.</i>	<i>£ s.</i>	
Lincoln middle wethers	19	—	19 0	20 15—21 0	19 10			
Downes and „	18—18 10		18 10	18 0—18 10	17 0			

TABLE VII.—Average Prices per Pound of Colonial and of Domestic Wools—Contd.

Description of Wool.	1863.			1864.			1865.			1866.			
	s.	d.	s. d.	s.	d.	s. d.	s.	d.	s. d.	s.	d.	s. d.	
<i>New South Wales—</i>													
Superior and first fleece	2	2—2	10	2	1—2	6	2	1—2	6	2	3—2	8	
Medium	1	9—2	1	1	8—2	0	1	6—2	0	1	9—2	2	
Inferior	1	5—1	8	1	4—1	7	1	3—1	6	1	5—1	8	
Pieces and locks	1	6—1	9	1	2—1	7	1	1—1	6	1	6—1	10	
Grease	0	11—1	1	0	11—1	2	0	9—1	2	0	11—1	4	
<i>Victoria (Port Phillip)—</i>													
Superior and first fleece	2	3—2	7	2	1—2	6	2	0—2	7	2	4—2	10	
Medium	1	10—2	2	1	8—1	11	1	6—1	11	1	11—2	2	
Inferior	1	6—1	9	1	5—1	8	1	4—1	6	1	8—1	10	
Pieces and locks	1	6—1	10	1	2—1	8	1	1—1	7	1	4—1	10	
Grease	0	11—1	4	1	0—1	5	0	10—1	4	1	1—1	5	
<i>South Australian—</i>													
First fleece	1	9—2	0	1	8—2	0	1	7—1	10	—	—	—	
Medium	1	5—1	7	1	6—1	9	1	5—1	9	1	4—1	10	
Inferior	1	2—1	4	1	2—1	5	1	2—1	4	1	1—1	4	
Pieces	0	11—1	1	0	11—1	4	0	11—1	3	1	0—1	4	
Grease	0	9—1	0	0	10—1	1	0	9—1	3	0	9—1	3	
<i>Swan River—</i>													
Fine	1	7—2	0	1	8—2	0	1	8—1	11	—	—	—	
Medium	1	8—1	10	1	6—1	9	1	5—1	8	1	9—2	0	
Inferior	1	4—1	7	1	3—1	6	1	1—1	3	1	6—1	8	
Pieces and locks	1	2—1	5	1	0—1	4	1	0—1	5	1	1—1	4	
Grease	0	11—1	0	0	11—1	1	0	10—1	2	0	11—1	1	
<i>Van Dieman's Land—</i>													
Superior and first fleece	1	11—2	2	1	11—2	3	1	10—2	2	2	2—2	9	
Medium	1	7—1	10	1	6—1	9	1	6—1	10	1	9—2	1	
Inferior	1	4—1	6	1	4—1	6	1	3—1	5	1	5—1	7	
Pieces and locks	1	3—1	6	1	1—1	6	1	0—1	7	1	6—2	1	
Grease	0	10—1	0	0	10—1	0	0	10—1	0	0	10—1	3	
<i>New Zealand—</i>													
First fleece	1	11—2	1	1	10—2	1	1	9—2	1	1	10—2	4	
Medium (fair, good)	1	6—1	10	1	6—1	9	1	5—1	8	1	7—1	9	
Inferior	1	2—1	4	1	3—1	5	1	2—1	4	1	4—1	6	
Pieces and locks	1	0—1	4	0	11—1	4	0	11—1	4	1	3—1	6	
Grease	1	0—1	2	0	11—1	4	0	10—1	3	0	11—1	4	
<i>Cape of Good Hope—</i>													
Best snow white	—	—	—	—	—	—	2	1—2	5	1	10—2	2	
Scoured	1	4—1	11	1	7—2	2	1	6—2	1	1	5—1	7	
Average fleece	1	3—1	7	1	4—1	7	1	3—1	7	1	1—1	3	
Grease	0	7—0	11	0	7—0	10	0	6—0	11	0	9—1	0	
Per Pack of 240 lbs.													
<i>Domestic Wools—</i>													
Lincoln middle wethers	£	s.	£ s.	£	s.	£ s.	£	s.	£ s.	£	s.	£ s.	
Down ewes and „	21	0—21	10	23	10	—	27	10—28	0	25	10—26	0	
	20	0	—	21	10	22	0	23	0—23	10	21	10	—

TABLE VII.—Average Prices per Pound of Colonial and of Domestic Wools—Contd.

Description of Wool.	1867.		1868.		1869.		1870.					
	s.	d.	s.	d.	s.	d.	s.	d.				
<i>New South Wales—</i>												
Superior and first fleece	2	1—2	10	1	10—2	4	1	9—2	5	1	8—1	11
Medium	1	5—1	10	1	3—1	6	1	2—1	5	1	3—1	5
Inferior.....	1	2—1	5	0	11—1	2	0	10—1	1	1	0—1	3
Pieces and locks	1	0—1	4	0	10—1	2	0	10—1	2	0	10—1	1
Grease	0	8—0	11	0	8—0	10	0	7—0	9	0	6—0	9
<i>Victoria (Port Phillip)—</i>												
Superior and first fleece	2	4—2	10	2	0—2	7	1	10—2	4	1	10—2	6
Medium	1	8—2	0	1	5—2	0	1	4—1	7	1	3—1	8
Inferior	1	3—1	8	1	0—1	4	0	11—1	2	1	0—1	2
Pieces and locks	1	1—1	7	0	11—1	5	0	11—1	3	0	11—1	3
Grease	1	0—1	3	0	9—1	1	0	10—1	0	0	9—1	0
<i>South Australian—</i>												
First fleece	1	8—1	10	1	5—1	7	1	3—1	5	1	2—1	4
Medium	1	4—1	7	1	2—1	5	1	0—1	2	0	11—1	2
Inferior	1	0—1	3	0	10—1	1	0	9—0	11	0	8—0	10
Pieces	1	0—1	2	0	9—1	0	0	8—0	11	0	8—0	11
Grease	0	9—1	0	0	8—0	10	0	7—0	10	0	7—0	10
<i>Swan River—</i>												
Fine	1	6—1	9	1	4—1	6	1	2—1	4	1	2—1	4
Medium.....	1	3—1	5	1	1—1	4	1	0—1	2	1	0—1	2
Inferior.....	1	1—1	4	0	10—1	0	0	9—0	11	0	9—0	11
Pieces and locks	0	11—1	2	0	9—1	0	0	7—0	9	0	7—0	10
Grease	0	8—0	11	0	8—0	9	0	7—0	8	0	7—0	9
<i>Van Dieman's Land—</i>												
Superior and first fleece	1	11—2	5	1	9—2	2	1	7—2	0	1	8—2	1
Medium	1	6—1	10	1	8—1	11	1	2—1	5	1	3—1	5
Inferior.....	1	2—1	6	0	11—1	2	0	10—1	1	0	11—1	2
Pieces and locks	1	2—1	6	0	10—1	2	0	9—1	1	0	10—1	1
Grease	0	10—1	0	0	8—0	10	0	8—0	10	0	8—0	9
<i>New Zealand—</i>												
First fleece	1	8—2	1	1	7—1	10	1	7—1	10	1	6—1	10
Medium (fair, good)	1	4—1	8	1	3—1	7	1	2—1	5	1	2—1	5
Inferior.....	1	0—1	4	0	11—1	2	0	10—1	0	0	10—1	0
Pieces and locks	1	0—1	3	0	9—1	2	0	8—1	0	0	11—1	3
Grease	0	11—1	3	0	9½—1	0	0	8—0	11	0	9—0	11
<i>Cape of Good Hope—</i>												
Best snow white	1	6—1	11	1	6—1	10	1	4—1	8	1	5—1	9
Scoured.....	1	3—1	6	1	2—1	4	1	1—1	3	1	1—1	3
Average fleece	1	0—1	2	1	0—1	2	0	11—1	1	0	10—1	0
Grease	0	8—0	9	0	7—0	8	0	6—0	7½	0	6—0	7½
Per Pack of 240 lbs.												
<i>Domestic Wools—</i>												
Lincoln middle wethers	£	s.	£	s.	£	s.	£	s.	£	s.	£	s.
Down ewes and „	20	0	13	10	17	10	—	—	15	10—16	0	0
	17	18	14	0	14	0—14	10	10	18	10	—	—

MISCELLANEA.

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I.—*Memorial to the Home Secretary as to Uniformity in Census of 1871.*

THE following memorial has been presented at the Home Office:—

To the Right Honourable Henry Austin Bruce, M.P., &c., &c.,
Her Majesty's Principal Secretary of State for the Home Department.

Memorial of the Committee of the British Association, appointed in Liverpool, September, 1870, for the purpose of urging upon Her Majesty's Government the expediency of arranging and tabulating the results of the approaching Census in the three several parts of the United Kingdom, in such a manner as to admit of ready and effectual comparison.

Your memorialists beg respectfully to represent that the value of statistical information depends mainly upon the accuracy and expedition with which comparisons can be made between facts relating to different districts.

They also consider that the ease and rapidity with which researches in the census tables can be made is one principal object to be held in view in determining the form of their publication. They, therefore, desire that not only should the enumeration of the people be conducted in all places in an exactly uniform manner, so far as is compatible with the terms of the several Census Acts, but that there should be no divergence in the modes of tabulating and printing the results. They wish that the tables for England, Scotland, and Ireland should form as nearly as possible one uniform and consistent whole.

Your memorialists could specify a great many points in which there was divergence between the tables for 1861, but they will mention only a few of the more important cases.

1. The detailed population tables of England, Scotland, and Ireland differ as regards the periods of age specified. The Scotch report gives twenty-one intervals of age, the Irish report generally twenty-two, and the English only thirteen. Either one-third of the printed matter in the Scotch and Irish tables is superfluous, or that in the English tables deficient.

2. The classification of occupations is apparently identical in the three reports, but there is much real discrepancy between the Irish and English reports, rendering exact comparison difficult.

3. In the Irish report there is no comparison and classification of occupations according to age, classification according to religions

being substituted, although such a classification could not be made in England or Scotland.

4. In the appendix to the English report appears a table (No. 56), giving most important information as regards the numbers of the population at each year of age. Inconvenience has been felt from the want of similar information concerning the populations of Scotland and Ireland.

5. In the appendix to the Irish report they find some interesting Tables (II, III, and IV), to which there is nothing exactly corresponding in the other reports, so far as they have been able to discover.

6. The tables, even when containing the same information, are often stated in different forms and arrangements, seriously increasing the labour of research.

Your memorialists therefore beg to suggest:

- I. That the principal body of tables relating to the numbers, age, sex, birthplace, civil condition, and occupation of the people, should be drawn up and printed in an exactly identical form for the three parts of the United Kingdom.
- II. That while the Commissioners may with great advantage continue to exercise their free discretion in drawing up such minor tables as appear to have special interest for distinct localities, they should agree to prepare in an uniform manner such minor or summary tables as may be of importance as regards all the parts of the United Kingdom.
- III. That a General Index of Subjects should be prepared for the whole of the reports, appendices, and tables, so that an inquirer can readily ascertain where the corresponding information for different parts of the United Kingdom is to be found, without making, as hitherto, three independent searches through a mass of complex and almost unindexed information.

It would appear that the officers engaged in superintending the Census of 1861, acted to a certain extent in concert and agreement.

Your memorialists beg respectfully to request that those officers be instructed, on the present occasion, to confer with each other prior to drawing up the tables for 1871, with a view of preserving perfect uniformity in their operations, and avoiding all such divergencies in the three reports as are not required by the Census Acts, or the essential differences of the three Kingdoms.

Signed on behalf of the Committee, 8th December, 1870.

W. STANLEY JEVONS, F.S.S.,

President of the Statistical Section of the British Association for the Advancement of Science, Liverpool, 1870.

JAMES HEYWOOD, M.A., F.R.S.,

Vice-President of the Statistical Society.

JACOB WALEY, F.S.S.,

One of the Secretaries of the Statistical Society.

EDMD. MACBORY, M.A.,

Secretary of the Committee of the British Association for a Uniformity of Plan in the Census Tables of the United Kingdom.

II.—*Salaries of Political Officers.*

FROM the *Economist*.—

"An eminent authority, well qualified to treat the subject of the pay of the Ministers of the Crown, has shown that, extending the observations of a series of years so as to obtain an average result, the salary of the First Lord of the Treasury was only equivalent in value to a life annuity of about 338*l.*, commencing at the age of 21; and if the uncertainty of success, the expenses involved in the duties and dignities of office, the expenses of elections, and other incidental expenses of attendance in Parliament are taken into account, it will be evident that the value of the salary of a successful statesman is inconsiderable. If the duties of Ministers have increased, the emoluments of the highest offices under the Crown have certainly not been proportionately augmented. The following are the facts concerning fifty members of the Government holding office during the pleasure of the Crown, as returned in the estimates for the civil service, army, navy, and inland revenue, the finance accounts, and other official sources:—The salaries of the fifteen Cabinet Ministers amount to 64,000*l.* per annum, or, excluding the Lord Chancellor, who receives 10,000*l.* per annum (6,000*l.* per annum as Lord Chancellor and 4,000*l.* per annum as Speaker of the House of Lords), the 14 Cabinet Ministers receive 54,000*l.* per annum, thus:—First Lord of the Treasury, 5,000*l.*; Lord President of the Council, 2,000*l.*; Lord Privy Seal, 2,000*l.*; Secretary of State, Home Department, 5,000*l.*; Secretary of State, Foreign Department, 5,000*l.*; Secretary of State, Colonial Department, 5,000*l.*; Secretary of State, War Department, 5,000*l.*; Secretary of State, Indian Department, 5,000*l.*; Chancellor of the Exchequer, 5,000*l.*; First Lord of the Admiralty, 4,500*l.*; Postmaster-General, 2,500*l.*; Secretary for Ireland, 4,000*l.*; President of the Board of Trade, 2,000*l.*; President of the Poor Law Board, 2,000*l.*. Seventeen other principal Ministers, Under Secretaries, &c., not in the Cabinet, receive 27,000*l.* per annum, viz.—First Commissioner of Works, &c., 2,000*l.*; Vice-President of Council on Education, 2,000*l.*; Joint Secretaries of the Treasury, 2,000*l.* each; Third Lord of the Treasury, 1,000*l.*; two other Lords of the Treasury, viz., a Scotch Lord and an Irish Lord, 1,000*l.* each; Chancellor of the Duchy of Lancaster, 2,000*l.*; five Parliamentary Under Secretaries of State—Home Department, 1,500*l.*; Foreign Department, 1,500*l.*; Colonial Department, 1,500*l.*; War Department, 1,500*l.*; Indian Department, 1,500*l.*; three Parliamentary Secretaries—Admiralty, 2,000*l.*; Poor Law Board, 1,000*l.*; and Board of Trade, 1,500*l.*. By the Act 30 and 31 Victoria, cap. 72 (August, 1867), it was provided that after the next vacancy of the office of the Vice-President of the Board of Trade such office should be abolished, and in lieu thereof a Parliamentary Secretary should be appointed, at a salary not exceeding 1,500*l.* per annum. The Judge Advocate-General receives 2,000*l.* per annum. The two law officers of the Crown—viz., the Attorney-General and the Solicitor-General—are paid by fees, and the amount is unknown. The Lord Lieutenant of Ireland receives 20,000*l.* per annum for the Court in Dublin; the other Ministers for Ireland are the Lord Chancellor, 8,000*l.*; and the two law officers, viz., the Attorney-General and the Solicitor-General; the two latter are paid by fees, and the amount is unknown. The Ministers for Scotland are the Lord Advocate, who receives 2,388*l.* per annum; and the Solicitor-General, 955*l.*. Ten of the chief officers of the Queen's Household receive in the aggregate 15,638*l.* per annum, paid out of the Civil List, viz.—Master of the Horse, 2,500*l.*; Lord Steward, 2,000*l.*; Treasurer and Controller of Accounts, 3,110*l.*; Controller of the Household, 904*l.*; Captain of the Corps of Gentlemen at Arms, 1,000*l.*; Captain of the Yeomen of the Guard, 1,000*l.*; Lord Chamberlain, 2,000*l.*; Vice-Chamberlain, 924*l.*; Master of the Buckhounds, 1,700*l.*; Mistress of the Robes, 500*l.*. The above results may be thus summarised:—Fifteen Cabinet Ministers receive 64,000*l.* per annum; seventeen other principal ministers, under secretaries, &c., receive 27,000*l.* per annum, exclusive of those paid by fees; two Ministers for Ireland receive 28,000*l.* per annum; two Ministers for Scotland receive 3,343*l.*

per annum; and ten of the chief members of the Queen's Household receive 15,638*l.* per annum. Thus, exclusive of the four law officers, forty-six of the principal ministers, &c., receive in the aggregate 137,981*l.* per annum. A comparison of the incomes of the highest classes of professional men with the salaries of the principal ministers of the country shows that the highest order of the political servants of the Crown are certainly not over-paid; indeed, the salaries bear no sort of proportion to the outlay necessary in some of the great offices of the State. To the above list may be added the First Naval Lord of the Admiralty, at a salary of 1,000*l.* per annum, who will come in and go out with the Ministry, according to the proposed scheme of re-construction which we have already announced."

III.—*French Finance, 1853-69.*

FROM the *Globe*, London newspaper:—

"That deplorable want of foresight which has been so conspicuously manifested by France through the war with Prussia, may be traced even through a long series of years in the management of the finances of the empire. To some extent it must be admitted they have been influenced by exceptional circumstances; for very few years have passed during the present generation which have not seen France engaged in wars at home or abroad, or in the act of preparation for expected hostilities. Nevertheless, it is a little startling to find that in thirteen years there has been an *excess of expenditure* over revenue of more than 143,500,000*l.*, or an *average* annual excess of over 10,000,000*l.* sterling. This is reducible by 121,172,68*l.*, the amount of extraordinary revenues during the same period, but this sum only represents the proceeds of *loans*, by which means the balance sheet of the State has been maintained.

"Successive French Finance Ministers appear to have failed in their estimates for the budgets, for out of thirteen budgets, from 1853 to 1866, in twelve of which surpluses were promised, there would have been a deficit in every case but for the proceeds of loans. As a typical example, the budget of 1867, as presented, showed a surplus: but the Finance Minister, at the opening of the present year, acknowledged it resulted in a deficit. Seven millions sterling were taken of the last loan to balance the budget of 1867, and a portion was appropriated at the same time to the budget of 1870.

"It would, however, appear as if the tide of financial difficulty had turned just before the war broke out to upset all previous calculations and heap up a load of debts. In a lucid report to the Foreign Office, Mr. Sackville West spoke of an 'approved administration of the finances,' and opined that the general state of the revenue was such as to enable the Government to show a balance in its favour of 2,200,000*l.* for 1869. 'It may, however, be anticipated,' added Mr. West, in blissful unconsciousness of the terrible event hanging over France, 'that the extraordinary expenditure which rendered the loan necessary will not again occur, and that in consequence recourse will not in future be had to the usual means of balancing the budgets. The surplus of 1869 will, it is stated, enable the Government to reduce the floating debt by 560,000*l.* or 600,000*l.* with a reserve of 1,200,000*l.* The amount of this debt is at the present moment 32,720,000*l.* The estimated budget for the year 1870 would seem to be based upon sound calcu-

lations, and should no political or social crisis arrive to disturb the steady progress of the revenue returns, a more healthy financial situation may confidently be expected.'

"Though less elastic than that of England, the *revenue* of France has never halted in its course of expansion. The direct taxes, which produced 16,841,947*l.* in 1863, had increased to 21,453,535*l.* in 1866. Among these the *patent tax*—a tax imposed upon the exercise of every branch of industry—increased the most, viz., nearly 90 per cent. in the thirteen years. The proceeds of the registration and stamp duties augmented from 11,877,277*l.* to 17,579,272*l.* in the same period; and *forests* and *fisheries* from 1,392,951*l.* to 1,711,420*l.* On the other hand, there was a decided falling off in the revenue from *customs* and *salt tax*, viz., from 9,084,776*l.* in 1855, to 6,080,299*l.* in 1866. But the *indirect taxes* have during the thirteen years nearly doubled, i.e., from 13,650,528*l.* to 25,219,624*l.*, occasioned chiefly by the progressive augmentation of the proceeds of the *tobacco* monopoly and the duties on *drink*. The increase at the *post office* was from 1,975,846*l.* to 3,298,964*l.*; and from other sources of revenue from 5,589,486*l.* to 7,681,217*l.* The *extraordinary revenue*, made up chiefly of loans and railroad reimbursements, has, of course, varied considerably. In 1855, for instance, when the Crimean war taxed the resources of the old empire, it amounted to 66,750,864*l.*; again in 1859, the year of Solferino and the other battles for Italy, the extraordinary revenue amounted to 14,657,311*l.* The revenue of the year 1853-54 was also augmented by 2,040,000*l.* paid by the Lyons railroad, and by the proceeds of the loan from the Crimean war, which produced 9,960,000*l.* This extraordinary revenue has been absorbed either by exceptional expenditure, such as that consequent upon a war, or in making good deficiencies between the original and the definitive budgets, which have been by no means of an insignificant character, as appears from the following:—

Year.	Expenditure.		Revenue.	
	Estimated Budgets.	Definitive Budgets.	Estimated Budgets.	Definitive Budgets.
	£	£	£	£
1853	59,400,533	61,650,187	58,032,821	60,670,790
'54	60,668,814	79,271,103	60,811,523	71,847,912
'55	62,407,960	95,697,179	62,640,480	111,580,789
'56	63,931,461	87,831,265	64,063,470	76,520,082
1857	67,956,186	74,501,046	68,394,980	72,137,656
'58	68,679,568	74,339,749	69,484,607	74,999,118
'59	70,631,234	88,306,339	70,956,764	87,273,369
'60	72,998,311	83,363,646	73,034,174	78,658,070
1861	73,564,874	86,839,538	73,631,026	80,223,058
'62	78,790,760	88,513,608	78,962,801	87,158,864
'63	82,424,534	91,482,759	82,780,300	90,576,280
'64	84,143,729	90,268,250	84,417,494	88,179,215
1865	83,970,704	85,887,636	84,035,164	86,738,164
'66	83,325,504	88,122,978	83,391,690	87,562,489
'67	79,110,294	Not yet prepared	82,868,202	Not yet prepared
'68	81,189,204	"	86,788,164	"
'69	82,847,300	"	85,964,392	"

"Looking at the national balance sheets of the thirteen years, the expenditure would appear to have grown faster even than the revenue; and the departments where it has resulted are indicated in the following:—

Ministries of	1853.	1855.	1859.	1863.	1866.
	£	£	£	£	£
State	768,212	1,049,631	615,737	947,064	951,032
Justice.....	1,105,072	1,093,991	1,088,622	1,309,433	1,313,635
Foreign Affairs	370,425	410,769	468,974	514,497	522,997
Interior	5,417,066	6,299,703	6,316,560	7,863,372	8,118,832
Finance	27,770,906	33,794,729	38,548,692	42,845,436	40,405,254
War	12,909,682	34,624,298	24,263,472	19,169,550	17,812,778
Algiers	—	—	1,529,400	—	—
Marine	4,591,040	9,386,240	8,333,920	8,858,719	7,693,740
Instruction	2,685,512	2,556,068	2,766,520	3,059,368	3,323,777
Public Works.....	6,032,322	6,481,732	4,384,452	6,915,320	7,980,932
Total	61,650,187	95,697,179	88,306,339	91,482,759	88,122,978

"While hostilities continue it is, of course, futile to attempt to reckon up the losses and gauge the extent to which the finances of France have suffered from the war. Had peace been maintained, it was estimated that the revenue from direct and indirect taxes would have shown an augmentation of 1,600,000*l.* over the year 1869. It was proposed to devote 240,000*l.* of this sum to the public works, in addition to a sum already voted, and thus increased to 2,400,000*l.*; a sum of 360,000*l.* being kept in reserve for contingencies. What a contrast between the present prospect and that held out by the Finance Minister at the beginning of this year! An increase of 1,520,000*l.* was calculated upon; but the estimated expenditure would have exceeded by 920,000*l.* the budget of 1870—the revenue being 708,694,000*l.*, and the expenditure 66,769,360*l.* Here was a prospective surplus of 3,900,040*l.*, for which a warlike Government might have found a ready purpose. But the Government of the Emperor selected other channels for its appropriation. Reversing the policy which finds favour with the present Administration in this country, the French Government assigned 400,000*l.* for raising the salaries of the ill-paid Government servants. 1,700,000*l.* was to be applied to public works, and 120,000*l.* to public instruction. Upon primary instruction the State already bestowed 623,515*l.*, and upon secondary instruction, 147,474*l.* But the greatest burden to the empire under this head, was a sum of over two millions a-year, which was swallowed up by the staff and the administration of the Roman Catholic Church."

IV.—*Commercial Progress of Holland, 1844-69.*

From the *Globe*, London newspaper:—

"Again the Netherlands are brought into notice by the rumours of the intended annexation of Luxembourg to Germany. Commercially Holland might be little the worse for the loss of the Duchy; and, irrespective of international considerations, might find acquiescence in such an arrangement with a view to release her from

the somewhat equivocal position in which the present war has placed her, with Switzerland, Belgium, and Denmark. The modern Dutch are not a warring race. They have long given themselves over to the pursuits of peace, and the result is seen in their commerce, which has maintained a steady course of expansion.

"In the last twenty-five years the trade of Holland with other countries has more than doubled. Its general importations in 1869 were valued at 570,720,218 florins, as compared with 217,517,754 florins in the year 1849; the *imports* for home consumption 455,960,258 florins as against 175,803,208 florins in 1849; the general *exportations* 490,809,113 florins as compared with 216,723,252 florins in 1849; the export of goods not in bond 374,726,269 florins as against 127,114,498 florins; and the export of goods in bond 116,082,844 florins as against 89,668,754 florins in 1849. From a report lately made by Mr. Locock, Her Majesty's Secretary of Legation at the Hague, we perceive that the *imports* for consumption have doubled in the last fifteen years, but that the general imports have not quite kept pace with this progress, having doubled in eighteen years. The *export* of those goods which are either the product of the country itself, or which have been brought into it free of duty, or which have paid the duty previous to undergoing some manipulation, have doubled in the last fourteen and a-half years, while the general exports have required seventeen years to double themselves. In the last twenty-five years the periods of chief depression were 1848, 1858, and 1862. There are no traces of any unusual distress in the years 1866 or 1867, except a slight falling-off in general exports in the former year. The greatest increase was that of the general imports in 1856, which exceeded by 18½ per cent. those of the previous year.

"Upon the face of the report recently published by the Finance Department, there appears an increase to the extent of 3,643,630*l.* in the commerce of the Netherlands in 1869, the total exports and imports for 1868 being 166,328,322*l.*, and for 1869 169,971,852*l.* In reality, however, the growth of trade was greater, as the *bullion* movements, which are influenced by other than commercial causes, are included in the totals. What may be the commercial loss to the Netherlands entailed by the war of 1870, it is impossible to gauge. Unless there is a counter-balancing effect in the demand for Dutch produce and manufactures from Germany, the loss sustained by the Netherlands mercantile navy must be something alarming. The blockade of the German ports has partially stopped commerce with Holland. North German vessels have kept clear of Dutch waters, while the Prussian ports have been closed to the Dutch flag. Thus a large proportion of the 2,000 vessels composing the Netherlands mercantile navy is deprived of its trade. Industry, in consequence, has become paralysed; and the arming of the military element in the population, rendered necessary as a precaution for the protection of the frontier, has been calamitous in its effect upon trade.

"Before the war of 1870 Holland was largely concerned in commerce with Germany. *Prussia* held the most prominent place among the consumers of Dutch products, drawing not only for her own use, but for that of the inland countries situated beyond her. She monopolised 37 per cent. of the entire exports from Holland, while she sent in return 25 per cent. of German goods. Compared with the two previous years, 1867-68, it seems that while Dutch trade with *France* had diminished by one-third in two years, that with Great Britain, Belgium, *Prussia*, and the United States had increased; this country being the chief source from which Holland drew its supplies. It is noteworthy that though *shipping* continues to increase steadily in Dutch ports, the proportionate share in it which is taken by

the Dutch flag steadily decreases. Thus there has been a falling-off of a few mercantile ships, and a few thousand tons each year.

"What perhaps is of the greatest interest to Englishmen in connection with the Dutch trade is the import of *cattle* hither from Rotterdam. In 1869, Holland exported 92,000 oxen and cows, 48,700 calves, 57,000 pigs, and 363,000 sheep and lambs. This trade has more than doubled within the last twenty years, the rich pasturage in the Dutch lowlands rendering the occupation of a breeder very profitable when the herds and flocks are not stricken with disease. Of the live stock exported in 1869, Great Britain took 36,600 oxen, 27,000 calves, 27,000 pigs, and 304,000 sheep; Belgium also took a good number of each, and Prussia about 45,000 in all. For the sake of Dutch traders, as well as for that of meat consumers in this country, it is to be hoped that the murrain years of 1866-68 are not about to be repeated. 'Whole fields of luxuriant pasturage were left empty,' says Mr. Locock, 'whole farmyards were left desolate.' Great Britain, which in 1861 and 1862 took just four-fifths of the sheep, increased its demands during each of the three following years, and now that the supply has resumed its normal proportions, is the purchaser of *six-sevenths* of the whole number exported. *Belgium*, on the other hand, is the principal purchaser in cattle, drawing a steady supply of about 40,000 head a-year. In *veal*, however, Great Britain is again the largest and most valuable customer. Prussia used to take the largest number of *pigs*, but has since been outrun by England. Mr. Locock points out that 'the export of meat of all descriptions, whether fresh, salted, or smoked, is but small, consequent on the facilities for the transport of the live stock, and has of late years varied inversely with the export of live stock; thus, during the years of the cattle disease it rose to over 8,000,000 kilos., while the average in other years has not been more than about a quarter of that amount.'

"England is finding new markets from whence to draw her meat supply. While our demand for cattle in the last eight years doubled, the Dutch supply increased only one-fourth; while the demand for sheep considerably more than doubled, the supply drawn from Holland increased only by one-half. Nevertheless Holland still supplies us with 30 per cent. of the *cattle*, and 43 per cent. of the *sheep* imported. The danger to our home flocks and herds on the breaking out of disease in the Netherlands, must therefore be apparent. Some over-clever Dutch economists, however, are beginning to wail at the sight of so many cattle leaving for this country. They object to the duty of 7 per cent. on slaughtered horned cattle, or about a farthing a pound, when retailed. But as prime beef sells in the Hague at from 8½*d.* to 1*od.* per lb., a reduction of a farthing per pound Mr. Locock argues, is not likely to have much effect in stopping the export. There is no excise on pigs or sheep; and as the same joint which fetches at the Hague but little more than 6½*d.* per lb., realises, if sold in London, 1*od.* per lb., Mr. Locock asks, 'Is it surprising that over 300,000 sheep found their way last year from the Netherlands to Great Britain?' "

V.—National Debts, British and Foreign.

FROM the "Business Notes" of the *Economist*:—

"In a paper read before the British Association for the Advancement of Science, Mr. R. Dudley Baxter has presented in a very useful form a comparison

of the various national debts of the world—the comparison including a retrospect of the formation and history of each debt, a statement of its present amount, and an estimate of the debt-tax per head in each country. He complains with some justice of the difficulty of getting exact information, more especially in the case of France; but taking the statements as approximately accurate, we get a very interesting view of the principal debts of the world. The amount of debt and of debt-tax per head are as follows in the under-mentioned countries:—

	Amount of Debt.	Debt-Tax per Head.	
	£	s.	d.
United Kingdom	749,000,000*	17	—
United States	477,000,000	12	6
North and South Germany (about)	150,000,000	2	9
Holland	} 107,000,000 {	12	3
Belgium		—	8½
France	518,000,000	8	7
Austria	300,000,000	7	3
Prussia (about)	300,000,000	2	10
Spain („)	225,000,000	No estimate	
Italy („)	257,000,000	11	10

* Funded debt only.

England thus stands highest both in the amount of debt and the taxation on account of it; but in some respects she contrasts well with most of her neighbours. With the exception of the United States, and Holland, and Belgium, every country is adding more or less rapidly to its debt. The debt of France has risen to its present amount from 70,000,000*l.* in 1815; Austria, from 99,000,000*l.*; Russia, from 80,000,000*l.*; Spain, from 100,000*l.*; and Italy, from 50,000,000*l.* The debt of England, on the contrary, has decreased from 861,000,000*l.* to 749,000,000*l.*, while the interest has decreased in even a greater proportion. If we may make a suggestion, we think Mr. Baxter could easily add to the usefulness of his comparison on one or two points. Thus, in the statement of the debt-tax it might be useful to distinguish in all cases what is the tax for interest from the tax for repayment of debt. The mere *interest* on the English 3 per cent. debt of less than 800,000,000*l.*, cannot amount to 17*s.* 5*d.* per head over a population of 30,000,000, and that figure must include, therefore, the repayment involved in the terminable annuities. The amount of the foreign debts could also in some cases be made the subject of farther inquiry—the figures relating to France especially being apparently too low. Mr. Baxter estimates that the annual interest altogether amounts to 16,400,000*l.*; but in the budget for 1870 we find the following items:—

	£
Rentes	14,520,000
Interest on caution money	348,000
„ floating debt	960,000
Guaranteed interest on railways	1,040,000
	<u>16,868,000</u>

Besides a sum of about 360,000*l.* for interest and amortissement of loans for bridges, canals, &c., in which we cannot distinguish the amount appropriated for interest and the amount for reimbursement. This interest would imply a somewhat larger capital than Mr. Baxter reckons, and at any rate the point seems worth clearing up. The real debt of France before the present war could not be far short of 600,000,000*l.*, not reckoning at all the enormous burden of the '*rentes viagères*'—pensions and the like—which are incorporated in the budget with the public debt."

VI.—Salt Farming in France.

EXTRACTED from the *Mark Lane Express*:—

"The climate and situation of the southern departments of France that border the shores of the Mediterranean Sea are especially adapted for the production of salt in greater abundance than along other portions of the coast. There has always existed an active competition with the west, which includes the mouth of the Loire and the departments La Vendée, Charente, and Gironde, south of that river; but the natural advantages seem to preponderate greatly in favour of the south. Complaints have been made by the growers, and a commission, under the direction of the Minister of Agriculture, was appointed to inquire into the particulars. From the report published by that commission we extract certain portions, which may be interesting upon a branch of agriculture, that we believe possesses no similar counterpart in our own country.

"The uses of salt are many and important, especially of the coarser kinds, which are used for cattle, that can be procured from the marshes of the west, whilst in the south the qualities are able to compete with the rock salt productions of the departments of the east, the Jura, Meurthe, and Moselle, of which Nancy is their headquarters. Throughout the Midi we find the properties have been less subdivided, and in the three departments visited by the commission, it was ascertained that nine separate workings had a surface extent varying from 45 to 125 acres; ten under companies, of which three were from 45 to 90 acres, and seven from 350 to 2,500 acres. The superiority of these larger occupations consists in the fact that one salt maker, or *sawnier*, as he is called, two or three permanent assistants, and from ten to twenty day labourers, will suffice to manage the marsh, except during the busy season of harvest.

* * * * *

"The marsh itself in the ordinary way is a reservoir upon an extended scale, of which the soil forms a bottom upon which the water rests at a moderate depth, until it becomes concentrated into crystals under the influences of solar heat. Since the waters must be reduced to one-eighth of their volume before the deposit is obtained, they have to be collected in a state of saturation upon a confined portion of the marsh, more preserved than the rest, on account of the deposit which ought there to take place. The marsh has to be divided into many different parts, forming exterior and interior compartments, and last of all the salt tables. The outworks are intended to receive the waters until they have attained about 8°, the second take the water thus concentrated, and raise them to about 24°. In this state they are then carried upon the inner salt tables. The preparation of the marsh usually takes place in the early part of March, when the small ditches which divide the compartments are repaired of the damages sustained during the winter months. This is accomplished by mixing soil with faggots, or by reeds driven in with stakes. The divisions being thus replaced in good order, access is given to the water which flows at first into the exterior compartment.

"The end of each season generally finds certain portions of the waters distributed in different places, without having deposited their crystals of salt. These

virgin waters, as they are termed, which during the winter have undergone great variations, are placed either in the early part or during the season as a provision against failure, upon any part of the marsh to which they are best adapted according to their degree of concentration. When the outer reservoir has been filled, evaporation is allowed to work its effect leisurely upon the waters; then communication is made with the interior, and a fresh supply at the same time is drawn from the lake or ocean to make up the deficiency, and thus a continuous circulation is maintained. During the night the communications between the different parts of the marsh are interrupted by reason of the absence of evaporation. At the beginning of June the first waters introduced have in general reached a degree of concentration sufficiently high to be admitted to the salt tables. It is, therefore, necessary towards the end of May to turn attention to the preparation of these tables. This operation is delicate and important; for if badly done, the crystals adhere to the soil which blows up, and they cannot be taken at harvest time without a mixture of earth. The preparation of the tables generally consists in roughly levelling down the soil by passing over it some of the waters that are slightly concentrated, and then to press and unite it by means of a heavy stone roller. The tables are thus in readiness to receive the waters from the interior compartment, where they have nearly, if not altogether, attained the degree requisite for the purpose. In the latter case, the reservoir ought to be prepared as an ordinary salt table.

* * * * *

"The harvest takes place at different times, but under the same circumstances, in three departments visited by the commission. The salt during its formation accumulates at the bottom of the table, and not until it has attained a thickness of from 3 to 6 centimetres does the harvesting commence. This comprises two distinct operations, the *battage* and the *levage*. The former consists in collecting the salt into a certain number of conical heaps called *gerbes*. To accomplish this, water is passed over the salt bed, which is thus left exposed to the sun for two or three days. The crystals at the bottom of the table are then separated by means of a wooden shovel, edged with iron, that is passed horizontally beneath the bed of the salt. These layers, or plates, are then gathered into heaps. The separation is effected very adroitly, and the crystals when detached are free from all earthy mixtures. This work of the *battage* is most easily accomplished when the salt has been deposited from waters that have been highly concentrated, and since the operation requires great care, the *batteur* is paid by the day. The heaps thus formed remain exposed for several days, when their contents are transported by the roads which surround the marsh, and gathered into a stack. The transport of the salt constitutes the *levage*, and the labourers are paid at a fixed price, except in the Aude; whilst others are charged with the construction of the stacks or *comelles*, as they are called. Generally a *batteur* collects with the shovel from 8 to 10 tons per day, and a man carries upon his back, to the average distance of 100 metres, 4 to 5 tons each day. In some places the transport from the marshes is effected by women and children, who are paid from 60 cents to 1 fr. per diem. The stacks remain exposed to the rain for certain periods, after which time they are covered with thatch, and the cost of so doing varies from 20 or 35 to 40 cents per ton."

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REGISTRATION OF THE UNITED KINGDOM.

No. I.—ENGLAND AND WALES.

MARRIAGES—QUARTER ENDED JUNE, 1870.

BIRTHS AND DEATHS—QUARTER ENDED SEPTEMBER, 1870.

A.—*Serial Table of MARRIAGES, BIRTHS, and DEATHS, returned in the Years 1870-64, and in the QUARTERS of those Years.*

Calendar YEARS, 1870-64:—Numbers.

Years	'70.	'69.	'68.	'67.	'66.	'65.	'64.
Marriages No.	—	176,629	176,962	179,154	187,776	185,474	180,387
Births..... „	—	772,877	786,858	768,349	753,870	748,069	740,275
Deaths „	—	495,086	480,622	471,073	500,689	490,909	495,531

QUARTERS of each Calendar Year, 1870-64.

(I.) MARRIAGES:—*Numbers.*

<i>Qrs. ended last day of</i>	'70.	'69.	'68.	'67.	'66.	'65.	'64.
March..... No.	36,506	37,713	36,696	36,441	37,579	36,807	37,988
June „	46,491	43,071	45,364	45,589	48,577	45,827	44,599
September „	—	43,831	43,509	44,086	46,257	45,852	44,675
December „	—	52,014	51,393	53,088	55,363	56,988	53,125

(II.) BIRTHS:—*Numbers.*

<i>Qrs. ended last day of</i>	'70.	'69.	'68.	'67.	'66.	'65.	'64.
March..... No.	206,441	204,055	198,584	194,763	196,753	194,130	192,947
June „	203,484	188,459	202,839	199,660	192,437	192,988	188,835
September „	192,178	190,132	192,583	190,782	179,086	181,941	181,015
December „	—	190,231	192,852	183,144	185,594	179,010	177,478

(III.) DEATHS:—*Numbers.*

<i>Qrs. ended last day of</i>	'70.	'69.	'68.	'67.	'66.	'65.	'64.
March..... No.	143,991	133,437	119,676	134,008	138,136	140,410	142,977
June „	121,246	118,849	110,010	112,355	128,551	115,892	116,880
September „	124,258	114,654	130,482	108,513	116,650	118,362	112,223
December „	—	128,146	120,454	116,197	117,352	121,245	123,451

*Annual Rates of MARRIAGES, BIRTHS, and DEATHS, per 1,000 PERSONS
LIVING in the Years 1870-64, and the QUARTERS of those Years.*

Calendar YEARS, 1870-64:—General Ratios.

YEARS.....	'70.	Mean '60-69.	'69.	'68.	'67.	'66.	'65.	'64.
Estmd. Popln. of England in thousands in middle of each Year....	22,090	—	21,870	21,649	21,430	21,210	20,991	20,772
Persons Mar- ried	—	16·84	16·16	16·34	16·72	17·70	17·68	17·36
Births	—	35·38	35·34	36·35	35·85	35·54	35·64	35·64
Deaths.....	—	22·51	22·64	22·20	21·98	23·61	23·39	23·86

QUARTERS of each Calendar Year, 1870-64.

(I.) PERSONS MARRIED:—Ratio per 1,000.

Qrs. ended last day of	'70.	Mean '60-69.	'69.	'68.	'67.	'66.	'65.	'64.
March	13·46	14·03	14·04	13·64	13·84	14·42	14·28	14·72
June.....	16·90	17·08	15·82	16·84	17·08	18·40	17·54	17·24
September	—	16·36	15·88	15·92	16·80	17·28	17·32	17·04
December	—	19·75	18·80	18·76	19·56	20·64	21·46	20·22

(II.) BIRTHS:—Ratio per 1,000.

Qrs. ended last day of	'70.	Mean '60-69.	'69.	'68.	'67.	'66.	'65.	'64.
March	38·05	37·02	37·98	36·93	37·00	37·77	37·65	37·40
June.....	37·00	36·52	34·61	37·63	37·42	36·44	36·92	36·51
September	34·47	34·09	34·45	35·25	35·28	33·46	34·34	34·53
December	—	33·82	34·38	35·21	33·78	34·58	33·70	33·76

(III.) DEATHS:—Ratio per 1,000.

Qrs. ended last day of	'70.	Mean '60-69.	'69.	'68.	'67.	'66.	'65.	'64.
March	26·54	25·32	24·84	22·26	25·46	26·52	27·23	27·72
June.....	22·05	22·05	21·83	20·41	21·06	24·34	22·17	22·60
September	22·29	20·61	20·77	23·88	20·06	21·79	21·40	21·41
December	—	22·03	23·16	21·99	21·48	21·87	22·83	23·49

B.—Comparative Table of CONSOLS, PROVISIONS, PAUPERISM, and TEMPERATURE in each of the Nine QUARTERS ended September, 1870.

1	2	3	4	5		6	7	8		9	10
Quarters ending	Average Price of Consols (for Money).	Average Rate of Bank of England Dis- count.	Average Price of Wheat per Quarter in England and Wales.	Average Prices of Meat per lb. at the Metropolitan Meat Market (by the Carcase), with the <i>Mean</i> Prices.		Average Prices of Potatoes (York Regents) per Ton at Waterside Market, Southwark.	Pauperism.		Mean Tem- pera- ture.		
				Beef.	Mutton.		Quarterly Average of the Number of Paupers relieved on the <i>last day</i> of each week.				
							In-door.	Out-door.			
1868	£		s. d.	d. d. d.	d. d. d.	s. s. s.				°	
Sept. 30	94½	2·0	59 1	4½—6½ 5½	4½—6½ 5½	120—175 147	138,794	779,039	63·9		
Dec. 31	94½	2·4	51 11	4½—7 5½	4½—6½ 5½	70—140 105	152,747	795,761	45·1		
1869											
Mar. 31	92½	3·0	50 2	4½—7½ 6	4½—7½ 6½	70—140 105	162,308	850,883	41·3		
June 30	93½	4·2	45 7	4½—7½ 6½	5—7½ 6½	60—180 95	145,094	816,280	52·0		
Sept. 30	98	2·9	50 11	4½—7½ 6½	5½—7½ 6½	95—125 110	137,406	781,882	61·4		
Dec. 31	93½	2·8	46 -	4½—7½ 6½	5—7½ 6½	75—100 87	152,021	813,758	43·3		
1870											
Mar. 31	92½	3·0	42 3	4½—7 5½	5½—7½ 6½	95—110 102	164,387	892,822	38·0		
June 30	94	3·0	44 8	4½—6½ 5½	5½—7½ 6½	115—135 125	144,226	825,837	54·4		
Sept. 30	91½	3·9	50 4	4½—7½ 6	5½—8 6½	100—140 120	138,444	787,976	60·7		

C.—General Average Death-Rate Table:—Annual Rate of Mortality to 1,000 of the Population in the Eleven Divisions of England.

Divisions.	Average Annual Rate of Mortality to 1,000 Living in						
	Ten Years, 1861-60	1869.			1870.		
		Year.	Summer Quarter.	Autumn Quarter.	Winter Quarter.	Spring Quarter.	Summer Quarter.
I. London	23·6	24·7	24·3	26·7	26·7	22·0	23·4
II. South-Eastern counties	19·6	19·7	18·6	20·2	24·7	20·6	20·1
III. South Midland "	20·4	20·2	18·9	20·8	25·3	20·7	23·1
IV. Eastern counties	20·6	20·4	18·4	19·8	24·4	20·8	19·8
V. South-Western counties	20·0	19·9	17·1	20·2	26·1	21·3	18·8
VI. West Midland "	22·4	21·1	18·8	22·1	26·4	20·8	20·7
VII. North Midland "	21·1	22·0	20·0	22·1	24·9	20·7	21·6
VIII. North-Western "	25·6	25·2	23·2	25·7	28·6	23·1	25·3
IX. Yorkshire	23·1	25·8	23·9	26·6	27·4	24·7	26·7
X. Northern counties	22·0	23·2	21·3	22·8	25·1	20·8	22·7
XI. Monmouthshire and Wales	21·8	20·4	16·9	19·6	25·6	22·1	18·3

Note.—The mortality for the year 1869 is the mean of the quarterly rates.

D.—Special Average Death-Rate Table:—ANNUAL RATE of MORTALITY per 1,000 in TOWN and COUNTRY DISTRICTS of ENGLAND in each Quarter of the Years 1870-68.

	Area in Statute Acres.	Population Enumerated. 1861.	Quarters ending	Annual Rate of Mortality per 1,000 in each Quarter of the Years			
				1870.	Mean '60-69.	1869.	1868.
In 142 Districts, and 56 Sub-districts, comprising the Chief Towns.....	3,287,151	10,930,841	March ..	27·77	27·23	26·55	23·91
			June	22·81	23·42	22·78	22·22
			Sept.	23·98	22·98	23·32	26·84
			Dec.	—	24·53	25·75	24·25
			Year	—	24·54	24·60	24·31
In the remaining Dis- tricts and Sub-districts of England and Wales, comprising chiefly Small Towns and Country Parishes	34,037,732	9,135,383	Year	—	19·92	20·04	19·27
			March ..	24·87	22·91	22·56	20·09
			June	21·02	20·33	20·56	18·03
			Sept.	20·00	17·59	17·36	19·97
			Dec.	—	18·84	19·67	19·00

Note.—The three months January, February, March, contain 90, in leap year 91 days; the three months April, May, June, 91 days; each of the last two quarters of the year, 92 days. For this inequality a correction has been made in the calculations, also for the difference between 365 and 366 25 days, and 366 and 366 25 days in leap year.

E.—Special Town Table:—POPULATION; BIRTHS, DEATHS; MEAN TEMPERATURE and RAINFALL in last Summer Quarter, in Twenty Large Towns.

Cities, &c.	Estimated Population in the Middle of the Year 1870.	Births in 18 Weeks ending 1st Oct., 1870.	Deaths in 18 Weeks ending 1st Oct., 1870.	Annual Rate to 1,000 Living during the 18 Weeks ending 1st October.		Mean Temperature in 13 Weeks ending 1st Oct., 1870.	Rainfall in Inches in 13 Weeks ending 1st Oct., 1870.
				Births.	Deaths.		
Total of 20 towns in U. K.	7,216,325	62,340	45,556	34·6	25·3	59·0	4·56
London	3,214,707	26,953	18,816	33·5	23·4	60·8	5·50
Portsmouth.....	122,084	900	551	29·5	18·1	59·9	4·67
Norwich	81,087	614	593	30·3	29·3	60·0	5·97
Bristol	171,382	1,525	1,321	35·6	30·8	—	—
Wolverhampton.....	72,990	647	394	35·5	21·6	59·0	4·09
Birmingham	369,604	3,096	2,024	33·5	21·9	59·5	3·76
Leicester	97,427	939	770	38·6	31·6	—	—
Nottingham	88,888	682	554	30·7	24·9	59·9	3·49
Liverpool.....	517,567	4,622	4,381	35·7	33·9	59·3	5·39
Manchester.....	374,993	3,352	2,548	35·8	27·2	—	—
Salford	121,580	1,235	845	40·6	27·8	58·8	4·86
Bradford	143,197	1,337	1,120	37·3	31·3	59·6	3·16
Leeds	259,527	2,584	2,128	39·8	32·8	59·6	3·28
Sheffield	247,378	2,309	1,698	37·3	27·5	58·8	3·29
Hull	130,869	1,038	794	31·7	24·3	56·4	3·90
Sunderland.....	100,979	925	505	36·6	20·0	—	—
Newcastle-on-Tyne	133,367	1,246	853	37·4	25·6	56·3	3·56
Edinburgh	178,970	1,643	1,019	36·7	22·8	58·1	4·90
Glasgow	468,189	4,659	2,988	39·8	25·5	57·7	7·77
Dublin.....	321,540	2,034	1,654	25·8	20·6	59·5	5·32
Paris	1,889,842	—	—	—	—	—	—
Berlin	800,000	—	—	—	—	—	—
Vienna	622,087	—	4,337	—	27·9	63·3	—

F.—Divisional Table:—MARRIAGES Registered in Quarters ended 30th June, 1870-68; and BIRTHS and DEATHS in Quarters ended 30th September, 1870-68.

1 DIVISIONS. (England and Wales.)	2 AREA in Statute Acres.	3 POPULATION, 1861. (Persons.)	4 5 6 MARRIAGES in Quarters ended 30th June.		
			1870.	1869.	1868.
ENGLD. & WALES....Totals	37,324,883	No. 20,066,224	No. 46,491	No. 43,071	No. 45,226
I. London	77,997	2,803,989	8,116	7,445	8,011
II. South-Eastern	4,065,935	1,847,661	3,708	3,662	3,852
III. South Midland	3,201,290	1,295,515	2,132	2,038	2,200
IV. Eastern	3,214,099	1,142,562	1,705	1,599	1,695
V. South-Western	4,993,660	1,835,714	3,508	3,260	3,316
VI. West Midland	3,865,332	2,436,116	5,514	4,991	5,217
VII. North Midland	3,540,797	1,289,380	3,136	2,884	3,090
VIII. North-Western	2,000,227	2,935,540	7,596	7,131	7,640
IX. Yorkshire	3,654,636	2,015,541	5,064	4,503	4,654
X. Northern	3,492,322	1,151,372	3,206	2,874	2,864
XI. Monmthsh. & Wales	5,218,588	1,312,834	2,806	2,684	2,687

7 DIVISIONS. (England and Wales.)	8 9 10 BIRTHS in Quarters ended 30th September.			11 12 13 DEATHS in Quarters ended 30th September.		
	1870.	1869.	1868.	1870.	1869.	1868.
ENGLD. & WALES....Totals	No. 192,178	No. 190,132	No. 192,467	No. 124,258	No. 130,502	No. 114,654
I. London	26,953	27,444	26,979	18,816	19,149	19,207
II. South-Eastern	16,975	16,761	16,908	10,463	10,825	9,548
III. South Midland	11,525	11,532	11,868	7,842	7,810	6,439
IV. Eastern	9,372	9,062	9,385	5,779	6,302	5,414
V. South-Western	14,150	14,125	14,215	8,790	7,989	8,006
VI. West Midland	23,704	22,957	23,560	14,266	15,754	12,850
VII. North Midland	11,859	11,967	11,960	7,350	8,172	6,829
VIII. North-Western	30,754	30,296	31,024	21,651	24,054	19,726
IX. Yorkshire	21,621	21,493	21,200	15,049	15,520	13,391
X. Northern	13,145	12,628	12,983	7,660	8,350	7,152
XI. Monmthsh. & Wales	12,120	11,867	12,385	6,592	6,577	6,092

G.—General Meteorological Table, Quarter ended September, 1870.

[Abstracted from the particulars supplied to the Registrar-General by JAMES GLAISHER, Esq., F.R.S., &c.]

		Temperature of								Elastic Force of Vapour.		Weight of Vapour in a Cubic Foot of Air.		
		Air.		Evaporation.		Dew Point.		Air—Daily Range.		Water of the Thames.				
1870.	Months.	Mean.	Diff. from Average of 99 Years.	Mean.	Diff. from Average of 99 Years.	Mean.	Diff. from Average of 99 Years.	Mean.	Diff. from Average of 99 Years.		Mean.	Diff. from Average of 99 Years.	Mean.	Diff. from Average of 99 Years.
July ...		65·4	+3·9	59·7	+2·3	55·0	+1·3	22·1	+1·0	—	In. 433	In. +019	Gr. 4·3	Gr. +0·2
Aug. ...		61·1	+0·4	56·2	-1·1	52·0	-1·8	19·5	-0·1	—	388	-039	4·3	-0·3
Sept. ...		55·7	-0·8	53·0	-1·1	50·5	-0·7	20·4	+1·9	—	367	-014	4·1	-0·1
Mean...		60·7	+1·3	56·3	0·0	52·5	-0·4	20·7	+0·9	—	396	-008	4·4	-0·1

		Degree of Humidity.		Reading of Barometer.		Weight of a Cubic Foot of Air.		Rain.		Daily Horizontal Movement of the Air.	Reading of Thermometer on Grass.				
		Mean.	Diff. from Average of 99 Years.	Mean.	Diff. from Average of 99 Years.	Mean.	Diff. from Average of 99 Years.	Amnt.	Diff. from Average of 55 Years.		Number of Nights it was		Low-est Reading at Night.	High-est Reading at Night.	
1870.	Months.	Mean.	Diff. from Average of 99 Years.	Mean.	Diff. from Average of 99 Years.	Mean.	Diff. from Average of 99 Years.	Amnt.	Diff. from Average of 55 Years.	At or below 30°.	Between 30° and 40°.	Above 40°.			
July ...		70	- 5	In. 29·818	+0·11	Gr. 526	- 3	In. 2·0	-0·6	Miles. 221	0	3	28	36·8	60·3
Aug. ...		73	- 4	29·804	+0·12	529	0	2·0	-0·4	241	0	7	24	31·0	60·0
Sept. ...		83	+ 2	29·908	+0·07	537	+ 4	1·6	-0·3	228	2	17	11	28·3	59·5
Mean ...		75	- 2	29·843	+0·040	530	0	Sum 5·6	Sum -1·3	Mean 230	Sum 2	Sum 27	Sum 63	Lowest 30·0	Highest 60·3

Note.—In reading this table it will be borne in mind that the sign (—) minus signifies below the average, and that the sign (+) plus signifies above the average.

The mean temperature of July was 65°·4, being 3°·9 higher than the average of 99 years, higher than the corresponding temperature in 1869 by 0°·9, lower than 1868, by 2°·1, but higher than in any of the preceding years back to 1859.

The mean temperature of August was 61°·1, being 0°·4 higher than the average of 99 years, higher than in 1869 by 0°·3, but lower than in 1868 by 2°·5.

The mean temperature of September was 55°·7, being 0°·8 lower than the average of 99 years, and lower than in any year back to 1863, when 53°·7 was recorded.

The mean high day temperature of July and August were higher than their averages by 4°·1 and 0°·1 respectively, but lower in September by 1°·0.

The mean low night temperature of July was 3°·0 higher than the average, of August the same as, and of September 2°·9 lower than, the average.

Therefore the months of July and August were warm, and September cold, both by day and night.

H.—Special Meteorological Table, Quarter ended 30th September, 1870.

1	2	3	4	5	6	7	8	9
NAMES OF STATIONS.	Mean Pressure of Dry Air reduced to the Level of the Sea.	Highest Reading of the Thermo- meter.	Lowest Reading of the Thermo- meter.	Range of Tem- perature in the Quarter.	Mean Monthly Range of Tem- perature.	Mean Daily Range of Tem- perature.	Mean Tem- perature of the Air.	Mean Degree of Hu- midity.
	in.	°	°	°	°	°	°	
Guernsey	29·610	72·5	48·5	24·0	21·2	9·4	59·3	84
Osborne	29·556	92·0	40·9	51·1	39·6	19·9	61·7	87
Barnstaple	29·625	93·5	42·0	51·5	40·3	17·4	62·0	73
Royal Observatory	29·620	89·7	37·4	52·3	40·0	20·7	60·7	75
Royston	29·625	89·6	37·3	52·3	42·1	22·5	59·9	75
Lampeter	29·639	86·0	31·5	54·5	46·0	24·3	59·3	76
Norwich	29·593	81·0	40·0	41·0	34·9	16·3	69·7	73
Derby	29·618	85·0	37·0	48·0	36·0	18·1	60·6	65
Stonyhurst	29·615	82·7	34·6	48·1	39·2	18·7	57·4	82
Leeds	—	92·0	35·0	57·0	41·7	22·1	60·1	67
North Shields	29·686	76·2	38·0	38·2	28·6	13·0	56·0	79

10	11	12	13	14	15	16	17	18
NAMES OF STATIONS.	WIND.					Mean Amount of Cloud.	RAIN.	
	Mean estimated Strength.	Relative Proportion of					Number of Days on which it fell.	Amount collected.
		N.	E.	S.	W.			
Guernsey	1·3	10	6	6	9	3·7	20	in. 2·98
Osborne	0·6	9	6	8	8	4·9	25	4·74
Barnstaple	—	5	6	8	12	3·1	29	4·56
Royal Observatory	0·3	7	8	6	10	5·7	28	5·66
Royston	—	10	5	6	10	5·6	28	4·56
Lampeter	2·3	—	—	—	—	5·4	—	—
Norwich	—	9	6	5	11	—	31	6·70
Derby	—	7	8	5	11	—	24	3·07
Stonyhurst	—	7	6	5	13	5·4	48	9·14
Leeds	1·6	11	6	5	9	4·9	24	2·95
North Shields	1·8	11	6	5	9	6·0	41	3·66

No. II.—SCOTLAND.

MARRIAGES, BIRTHS, AND DEATHS IN THE QUARTER

ENDED 30TH SEPTEMBER, 1870.

I.—*Serial Table:—Number of Births, Deaths, and Marriages in Scotland, and their Proportion to the Population, Estimated to the Middle of each Year; also the Number during each Quarter of the Years 1870-86 inclusive.*

	1870.		1869.		1868.		1867.		1866.	
	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.
1st Quarter—										
Births	28,674	3'55	28,429	3'54	28,786	3'60	27,952	3'52	28,888	3'66
Deaths	22,184	2'75	20,481	2'54	18,086	2'26	19,977	2'51	19,096	2'42
Marriages ..	5,631	0'69	5,291	0'66	5,287	0'66	5,356	0'66	5,642	0'71
Mean Temperature }	36°·9		40°·0		40°·6		56°·5		38°·0	
2nd Quarter—										
Births	30,645	3'80	29,472	3'67	31,025	3'89	30,375	3'83	29,808	3'78
Deaths	17,984	2'20	19,449	2'42	16,928	2'12	17,475	2'20	18,575	2'35
Marriages ..	5,754	0'71	5,596	0'69	5,660	0'71	5,627	0'70	6,084	0'76
Mean Temperature }	51°·0		48°·4		51°·0		49°·0		49°·8	
3rd Quarter—										
Births	28,272	3'50	27,646	3'44	28,393	3'56	27,870	3'51	27,204	3'45
Deaths	16,555	2'05	16,532	2'06	16,662	2'09	15,125	1'90	15,470	1'95
Marriages ..	5,301	0'65	4,870	0'60	4,804	0'59	5,071	0'63	5,104	0'64
Mean Temperature }	57°·1		56°·4		57°·4		55°·2		54°·4	
4th Quarter—										
Births	—	—	27,848	3'47	27,519	3'45	27,847	3'51	27,772	3'52
Deaths	—	—	19,877	2'42	17,760	2'22	16,491	2'07	18,210	2'30
Marriages ..	—	—	6,326	0'78	6,202	0'77	6,564	0'82	6,908	0'87
Mean Temperature }	—		40°·9		41°·5		42°·3		48°·5	
Year—										
Population.	—		3,205,481		3,188,125		3,170,769		3,153,413	
Births	—	—	113,895	3'54	115,678	3'63	114,044	3'59	113,667	3'60
Deaths	—	—	75,789	2'36	69,386	2'17	69,068	2'17	71,350	2'26
Marriages ..	—	—	22,083	0'68	21,853	0'68	22,618	0'71	23,688	0'75

II.—*Special Average Table:—Number of Births, Deaths, and Marriages in Scotland and in the Town and Country Districts during the Quarter ending 30th September, 1870, and their Proportion to the Population; also the Number of Illegitimate Births, and their Proportion to the Total Births.*

	Population.		Total Births.			Illegitimate Births.		
	Census, 1861.	Estimated to Middle of 1870.	Number.	Per Cent.	Ratio. One in every	Number.	Per Cent.	Ratio. One in every
SCOTLAND	3,062,294	3,222,837	28,272	3'50	28	2,776	9'8	10'2
Town districts	1,643,282	1,796,989	17,190	3'82	26	1,662	9'6	10'3
Rural ,,	1,419,012	1,425,848	11,082	3'11	32	1,114	10'0	9'9

	Population.		Deaths.			Marriages.		
	Census, 1861.	Estimated to Middle of 1870.	Number.	Per Cent.	Ratio. One in every	Number.	Per Cent.	Ratio. One in every
SCOTLAND	3,062,294	3,222,837	16,555	2'05	48	5,301	0'65	152
Town districts	1,643,282	1,796,989	10,963	2'44	41	3,853	0'86	116
Rural ,,	1,419,012	1,425,848	5,592	1'57	64	1,448	0'40	246

III.—*Bastardy Table:—Proportion of Illegitimate in every Hundred Births in the Divisions and Counties of Scotland, during the Quarter ending 30th September, 1870.*

Divisions.	Per Cent. of Illegitimate.	Counties.	Per Cent. of Illegitimate.	Counties.	Per Cent. of Illegitimate.	Counties.	Per Cent. of Illegitimate.
SCOTLAND	9'8						
Northern	6'2	Shetland	3'5	Forfar	12'5	Lanark	8'5
North-Western	6'8	Orkney	4'1	Perth	11'8	Linlithgow ..	9'2
North-Eastern	15'8	Caithness	9'3	Fife	8'9	Edinburgh ..	8'5
East Midland..	11'3	Sutherland....	6'6	Kinross	7'5	Haddington ..	9'4
West Midland.	6'2	Ross and Cromarty } ..	4'7	Clackmannan } ..	12'3	Berwick	9'1
South-Western	8'4	Inverness	8'9	Stirling	6'4	Peebles.....	8'4
South-Eastern.	8'7	Nairn	10'5	Dumbarton ..	4'2	Selkirk	11'7
Southern	13'8	Elgin	17'2	Argyll	8'0	Roxburgh ..	11'2
		Banff	18'9	Bute	6'7	Dumfries	14'4
		Aberdeen	15'0	Renfrew	6'8	Kirkcudbright }	13'6
		Kincaidine....	18'6	Ayr.....	9'9	Wigtown	15'9

IV.—*Divisional Table:—MARRIAGES, BIRTHS, and DEATHS Registered in the Quarter ended 30th September, 1870.*

1	2	3	4	5	6
DIVISIONS. (Scotland)	AREA in Statute Acres.	POPULATION, 1861. (Persons.)	Marriages.	Births.	Deaths.
		No.	No.	No.	No.
SCOTLAND Totals	19,639,377	3,062,294	5,301	28,272	16,555
I. Northern	2,261,622	130,422	88	864	364
II. North-Western	4,739,876	167,329	100	1,158	603
III. North-Eastern	2,429,594	366,783	470	3,318	1,468
IV. East Midland	2,790,492	523,822	719	4,809	2,658
V. West Midland	2,693,176	242,507	338	1,934	1,153
VI. South-Western	1,462,397	1,008,253	2,501	11,079	7,041
VII. South-Eastern	1,192,524	408,962	861	4,000	2,357
VIII. Southern	2,069,696	214,216	224	1,610	911

No. III.—GREAT BRITAIN AND IRELAND.

SUMMARY of MARRIAGES, in the Quarter ended 30th June, 1870;
and BIRTHS and DEATHS, in the Quarter ended 30th September, 1870.

COUNTRIES.	[000's omitted].		Marriages.	Per 1,000 of Popu- lation.	Births.	Per 1,000 of Popu- lation.	Deaths.	Per 1,000 of Popu- lation.
	Area in Statute Acres.	Popu- lation, 1861. (Persons.)						
		No.	No.	Ratio.	No.	Ratio.	No.	Ratio.
England and Wales	37,325	20,066	46,491	2·3	192,178	9·5	124,258	6·2
Scotland	19,639	3,062	5,754	1·9	28,272	9·3	16,555	5·4
Ireland	20,323	5,799	5,326	0·9	34,680	5·9	18,289	3·2
GREAT BRITAIN AND IRELAND }	77,287	28,927	57,571	1·9	255,130	8·8	159,102	5·5

Note.—The numbers against Ireland represent the marriages, births, and deaths that the local registrars have *succeeded* in recording; but how far the registration approximates to absolute completeness, does not at present appear to be known. It will be seen that the Irish ratios of births, deaths, and marriages are much under those of England and Scotland.—ED. S. J.

ade of United Kingdom, 1870-69-68.—*Distribution of Exports* from United Kingdom, according to the Declared Real Value of the Exports; and the Computed Real Value (Ex-duty) of Imports at Port of Entry, and therefore including Freight and Importer's Profit.*

Merchandise (excluding Gold and Silver),
Imported from, and Exported to,
the following Foreign Countries, &c.

[000's omitted.]

First Six Months.

	1870.		1869.		1868.	
	Imports from	Exports to	Imports from	Exports to	Imports from	Exports to
I.—FOREIGN COUNTRIES:	£	£	£	£	£	£
Northern Europe; viz., Russia, Sweden, Norway, Denmark & Iceland, & Heligoland	9,013,	4,059,	6,524,	3,543,	8,487,	2,448,
Central Europe; viz., Prussia, Germany, the Hanse Towns, Holland, and Belgium	17,551,	18,881,	18,321,	18,606,	15,689,	18,145,
Eastern Europe; viz., France, Portugal (with Azores, Madeira, &c.), and Spain (with Gibraltar and Canaries)	21,517,	9,385,	21,607,	8,083,	20,244,	7,715,
Southern Europe; viz., Italy, Austrian Empire, Greece, Ionian Islands, and Malta	2,614,	4,200,	3,634,	4,141,	3,411,	3,140,
Spain; viz., Turkey, with Wallachia and Moldavia, Syria and Palestine, and Egypt	11,196,	8,311,	10,435,	7,008,	12,239,	6,635,
Northern Africa; viz., Tripoli, Tunisia, Algeria and Morocco	206,	165,	158,	161,	131,	73,
Eastern Africa	629,	489,	538,	452,	705,	446,
Western Africa; with African Ports on Red Sea, Aden, Arabia, Persia, Bourbon, and Kooria Moorla Islands	42,	136,	45,	69,	—	96,
Indian Seas, Siam, Sumatra, Java, Philippines; other Islands	1,093,	739,	1,048,	684,	769,	901,
South Sea Islands	34,	18,	2,	8,	30,	15,
China, including Hong Kong	5,098,	5,800,	4,925,	5,418,	4,650,	4,498,
United States of America	28,945,	13,190,	21,865,	18,293,	29,559,	10,541,
Mexico and Central America	647,	891,	720,	332,	453,	508,
Foreign West Indies and Hayti	2,818,	1,898,	1,890,	586,	1,632,	1,361,
Southern America (Northern), New Granada, Venezuela, and Ecuador	468,	1,070,	579,	1,373,	592,	1,241,
„ (Pacific), Peru, Bolivia, Chili, and Patagonia	3,662,	2,151,	2,449,	1,538,	3,598,	1,242,
„ (Atlantic) Brazil, Uruguay, and Buenos Ayres	4,356,	3,970,	4,589,	4,874,	4,735,	3,455,
Whale Fisheries; Grnld., Davis' Straits, Southn. Whale Fishery, & Falkland Islands	90,	—	34,	5,	22,	6,
<i>Total—Foreign Countries</i>	109,979,	74,353,	99,363,	70,174,	106,946,	62,466,
II.—BRITISH POSSESSIONS:						
British India, Ceylon, and Singapore	12,196,	11,377,	13,255,	9,806,	10,065,	12,111,
Austral. Cols.—N. So. W., Vict., and Queensland	7,291,	3,668,	5,607,	4,979,	3,798,	3,788,
„ „ So. Aus., W. Aus., Tasm., and N. Zealand	2,719,	1,360,	1,706,	1,536,	1,528,	1,518,
British North America	1,078,	2,696,	529,	2,240,	835,	2,020,
„ W. Indies with Btsh. Guiana & Honduras	2,851,	1,830,	2,837,	1,234,	3,222,	1,262,
ape and Natal	1,367,	860,	1,188,	710,	1,132,	715,
rt. W. Co. of Af., Ascension and St. Helena	187,	354,	234,	337,	187,	272,
auritius	712,	260,	448,	162,	756,	240,
hannel Islands	258,	351,	255,	308,	190,	259,
<i>Total—British Possessions</i>	28,659,	22,756,	26,059,	21,311,	21,587,	22,185,
General Total	£138,638,	97,109,	125,422,	91,485,	128,533,	84,601,

* i.e., British and Irish produce and manufactures.

IMPORTS.—(United Kingdom.)—First Eight Months (January—August).
1870-69-68-67-66.—Computed Real Value (*Ex-duty*), at Port of Entry (and
therefore including Freight and Importer's Profit), of Articles of Foreign and
Colonial Merchandise Imported into the United Kingdom.

(First Eight Months.) [000's omitted.] FOREIGN ARTICLES IMPORTED.		1870.	1869.	1868.	1867.	1866.
RAW MATS.— <i>Textile, &c.</i>	Cotton Wool	£ 36,828,	£ 34,304,	£ 37,306,	£ 39,753,	£ 58,205,
	Wool (Sheep's) ..	12,620,	11,281,	10,410,	12,747,	12,559,
	Silk*	13,156,	10,415,	10,977,	10,099,	9,168,
	Flax	3,825,	2,650,	3,079,	2,544,	3,005,
	Hemp	2,815,	2,634,	2,106,	1,623,	2,182,
	Indigo	2,152,	2,420,	2,378,	2,130,	1,861,
		71,396,	63,704,	66,256,	68,896,	86,970,
" " <i>Various.</i>	Hides	2,521,	1,793,	1,748,	1,642,	1,979,
	Oils	2,428,	2,481,	2,325,	2,585,	2,532,
	Metals	3,109,	3,170,	2,906,	2,488,	3,218,
	Tallow	1,752,	1,839,	834,	749,	1,233,
	Timber	5,184,	4,755,	4,274,	3,406,	4,564,
		14,994,	13,538,	12,086,	10,869,	13,526,
" " <i>Agricoll.</i>	Guano	2,182,	960,	1,486,	1,164,	921,
	Seeds	1,572,	1,702,	2,213,	1,587,	1,694,
		3,754,	2,662,	3,699,	2,751,	2,615,
TROPICAL, &c., PRODUCE.	Tea	5,860,	5,300,	5,460,	4,942,	6,091,
	Coffee	2,737,	3,151,	3,244,	2,679,	2,457,
	Sugar & Molasses	12,820,	10,640,	9,950,	9,743,	8,756,
	Tobacco	834,	646,	973,	917,	1,229,
	Rice	883,	1,638,	1,469,	504,	449,
	Fruits	619,	768,	784,	265,	89,
	Wines	3,351,	3,706,	3,756,	3,202,	3,335,
	Spirits	1,813,	1,384,	1,377,	1,209,	1,294,
		28,917,	27,233,	27,010,	23,461,	23,700,
FOOD	Grain and Meal.	21,796,	20,828,	27,193,	25,581,	18,896,
	Provisions	9,434,	9,372,	7,646,	5,759,	6,210,
		31,230,	30,200,	34,839,	31,340,	25,108,
Remainder of Enumerated Articles		10,175,	11,246,	8,672,	4,131,	3,893,
TOTAL ENUMERATED IMPORTS		160,466,	148,583,	152,562,	141,448,	155,812,
Add for UNENUMERATED IMPORTS (say)		40,116,	37,145,	38,140,	37,112,	38,953,
TOTAL IMPORTS		200,582,	185,728,	180,702,	178,560,	194,765,

* "Silk," inclusive of manufactured silk, "not made up."

EXPORTS.—(United Kingdom.)—**First Nine Months (January—September), 1870-69-68-67-66.**—*Declared Real Value, at Port of Shipment, of Articles of BRITISH and IRISH Produce and Manufactures Exported from United Kingdom.*

(First Nine Months.)	[000's omitted.]	1870.	1869.	1868.	1867.	1866.
BRITISH PRODUCE, &c., EXPORTED.		£	£	£	£	£
MANURES.—Textile. Cotton Manufactures..		42,406,	39,459,	39,006,	42,123,	46,100,
	" Yarn	10,823,	10,484,	10,989,	10,923,	9,927,
Woolen Manufactures		16,343,	17,671,	14,834,	15,991,	16,790,
	" Yarn	3,754,	4,465,	4,927,	4,491,	3,290,
Silk Manufactures.....		1,762,	1,567,	1,653,	1,159,	1,349,
	" Yarn	134,	166,	159,	146,	173,
Linen Manufactures		5,528,	5,182,	5,807,	5,781,	7,260,
	" Yarn	1,755,	1,721,	1,785,	1,917,	1,745,
		82,505,	80,715,	78,610,	82,531,	86,634,
" Sewed. Apparel		1,472,	1,700,	1,588,	1,588,	2,046,
	Haberdy. and Mlnry.	3,605,	3,537,	3,423,	3,541,	4,308,
		5,077,	5,237,	5,006,	5,129,	6,354,
METALS, &c. Hardware		3,339,	3,239,	2,784,	2,934,	3,310,
	Machinery	4,094,	3,745,	3,450,	3,748,	3,354,
	Iron	16,370,	14,713,	11,149,	11,586,	11,289,
	Copper and Brass.....	2,345,	2,515,	2,326,	2,296,	2,203,
	Lead and Tin	3,519,	3,473,	2,987,	2,639,	2,559,
	Coals and Culm	4,132,	3,786,	4,096,	4,034,	3,859,
		33,799,	31,471,	26,792,	27,237,	26,574,
Ceramic Manufcts. Earthenware and Glass		1,888,	1,993,	1,826,	1,838,	1,821,
Indigenous Mfrs. Beer and Ale.....		1,451,	1,417,	1,387,	1,455,	1,153,
	and Products. Butter	212,	196,	194,	195,	265,
	Cheese	78,	74,	77,	88,	126,
	Candles	82,	128,	162,	150,	176,
	Salt	294,	332,	383,	358,	298,
	Spirits	138,	172,	128,	123,	117,
	Soda	1,083,	1,033,	1,147,	1,229,	1,163,
		3,338,	3,352,	3,478,	3,598,	3,698,
Various Manufcts. Books, Printed		448,	484,	496,	442,	439,
	Furniture	163,	176,	140,	146,	175,
	Leather Manufactures	1,806,	1,926,	1,759,	1,349,	1,423,
	Soap	164,	163,	192,	217,	170,
	Plate and Watches	359,	372,	277,	299,	308,
	Stationery	358,	352,	304,	283,	279,
		3,293,	3,473,	3,168,	2,736,	2,794,
Remainder of Enumerated Articles		10,592,	9,138,	8,121,	7,870,	7,789,
Unenumerated Articles.....		8,142,	7,328,	6,703,	6,263,	6,273,
TOTAL EXPORTS.....		148,634,	142,707,	133,704,	137,202,	141,937,

SHIPPING.—FOREIGN TRADE.—(United Kingdom.)—First Nine Months (January—September), 1870-69-68-67.—Vessels Entered and Cleared with Cargoes, including repeated Voyages, but excluding Government Transports.

(First Nine Months.) ENTERED:—	1870.			1869.		1868.		1867.	
	Vessels.	Tonnage (000's omitted.)	Average Tonnage.	Vessels.	Tonnage (000's omitted.)	Vessels.	Tonnage (000's omitted.)	Vessels.	Tonnage (000's omitted.)
<i>Vessels belonging to—</i>	No.	Tons.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.
Russia	516	184,	357	466	159,	434	139,	382	132,
Sweden	1,169	203,	174	988	169,	997	174,	902	159,
Norway	3,500	837,	239	3,421	818,	3,406	808,	3,047	701,
Denmark	1,743	211,	121	1,581	193,	1,768	201,	1,753	200,
Prussia and Ger. Sts.	1,836	553,	301	2,819	761,	3,110	833,	2,822	723,
Holland and Belgium	1,419	239,	168	1,548	226,	1,445	206,	1,391	187,
France	1,670	196,	117	1,765	170,	1,736	168,	1,852	165,
Spain and Portugal	368	127,	345	402	133,	409	141,	369	123,
Italy & other Eupn. Sts.	899	353,	393	961	359,	608	217,	698	223,
United States	383	382,	997	284	276,	392	383,	319	328,
All other States	19	13,	684	9	4,	11	4,	7	3,
United Kingdm. & } Depds. }	13,522	3,298,	244	14,244	3,268,	14,316	3,274,	13,542	2,944,
	20,130	7,503,	373	20,451	7,426,	19,940	6,968,	19,819	6,891,
<i>Totals Entered....</i>	33,652	10,801,	321	34,695	10,694,	34,256	10,242	33,361	9,385,
CLEARED:—									
Russia	466	170,	365	407	148,	341	120,	321	115,
Sweden	1,126	187,	166	978	166,	890	144,	840	137,
Norway	2,412	510,	211	2,162	442,	1,924	380,	1,695	335,
Denmark	1,989	236,	119	1,816	209,	1,961	215,	1,994	219,
Prussia and Ger. Sts.	2,675	656,	247	4,076	958,	4,447	1,050,	4,152	906,
Holland and Belgium	1,670	303,	181	1,614	258,	1,734	274,	1,552	246,
France	3,261	412,	126	2,701	320,	3,117	338,	3,357	367,
Spain and Portugal	357	127,	356	312	116,	381	137,	368	122,
Italy & other Eupn. Sts.	1,151	462,	401	1,056	402,	734	281,	745	257,
United States	520	510,	981	340	325,	503	470,	424	413,
All other States	12	4,	333	11	3,	13	4,	10	3,
United Kingdm. & } Depds. }	15,639	3,577,	229	15,473	3,346,	16,045	3,413,	15,458	3,125,
	25,844	9,139,	353	24,414	8,563,	24,768	8,323,	23,824	7,991,
<i>Totals Cleared....</i>	41,483	12,716,	306	39,887	11,909,	40,813	11,736,	39,282	11,116,

GOLD AND SILVER BULLION AND SPECIE.—IMPORTED AND EXPORTED.—(United Kingdom.)—Computed Real Value for the First Nine Months (January—September), 1870-69-68.

[000's omitted.]

(First Nine Months.)	1870.		1869.		1868.	
	Gold.	Silver.	Gold.	Silver.	Gold.	Silver.
Imported from:—	£	£	£	£	£	£
Australia	4,797,	6,	5,943,	2,	5,327,	—
So. Amca. and W. } Indies	1,245,	2,754,	2,122,	2,077,	1,198,	2,395,
United States and } Cal.	6,413,	1,668,	1,471,	795,	6,812,	1,801,
	12,455,	4,428,	9,536,	2,874,	13,247,	4,196,
France.....	253,	1,175,	683,	1,530,	268,	814,
Hanse Towns, Holl. } & Belg.	297,	14,	27,	956,	47,	170,
Portgl., Spain, and } Gbrltr.....	37,	76,	40,	91,	442,	85,
Mlt., Trky., and } Egypt	990,	18,	154,	11,	40,	91,
China	87,	43,	1,	—	—	—
West Coast of Africa	78,	3,	87,	—	72,	6,
All other Countries....	1,042,	1,129	117,	30,	481,	565,
Totals Imported....	15,189,	6,886,	10,654,	5,492,	14,597,	5,927,
Exported to:—						
France.....	3,358,	473,	3,284,	2,924,	6,069,	1,317,
Hanse Towns, Holl. } & Belg.	1,508,	2,860,	85,	343,	134,	3,287,
Portgl., Spain, and } Gbrltr.....	290	284,	60,	—	588,	1,
	5,151,	3,617,	3,379,	3,267,	6,781,	4,605,
Ind. and China (via } Egypt).....	368,	1,869,	1,063	2,814,	844,	723,
Danish West Indies	—	—	—	—	—	—
United States	70,	22,	874,	—	113,	—
South Africa	118,	—	20,	—	63,	—
Mauritius	—	—	—	—	—	—
Brazil	77,	75,	435,	—	931,	49,
All other Countries....	860,	349,	733,	493,	640,	180,
Totals Exported....	6,644,	5,932,	6,504,	6,574,	9,372,	5,557,
Excess of Imports	8,545,	954,	4,150,	—	5,225,	370,
„ Exports	—	—	—	1,082,	—	—

REVENUE.—(UNITED KINGDOM.)—30TH SEPTEMBER, 1870-69-68-67.

Net Produce in YEARS and QUARTERS ended 30th SEPT., 1870-69-68-67.

[000's omitted.]

QUARTERS, ended 30th Sept.	1870.	1869.	1870.		Corresponding Quarters.	
			Less.	More.	1868.	1867.
	£	£	£	£	£	£
Customs	4,828,	5,338,	506,	—	5,488,	5,502,
Excise	4,559,	4,326,	—	233,	4,184,	4,300,
Stamps	2,120,	2,179,	59,	—	2,084,	2,200,
Taxes	93,	318,	225,	—	300,	272,
Post Office	1,110,	1,200,	90,	—	1,190,	1,200,
Telegraph Service	100,	—	—	100,	—	—
	12,810,	13,856,	879,	433,	13,246,	13,474,
Property Tax	448,	1,128,	680,	—	1,060,	648,
	13,258,	14,484,	1,559,	433,	14,306,	14,122,
Crown Lands	75,	74,	—	1,	73,	72,
Miscellaneous	869,	668,	—	201,	740,	720,
Totals	14,202,	15,226,	1,159,	535,	15,119,	14,914,
			NET DEC. £1,024,327			

YEARS, ended 30th Sept.	1870.	1869.	1870.		Corresponding Years.	
			Less.	More.	1868.	1867.
	£	£	£	£	£	£
Customs	20,542,	22,331,	1,789,	—	22,590,	22,492,
Excise	22,291,	20,718,	—	1,573,	19,875,	20,324,
Stamps	8,965,	9,427,	462,	—	9,250,	9,609,
Taxes	3,544,	3,466,	—	78,	3,507,	3,525,
Post Office	4,630,	4,670,	40,	—	4,590,	4,590,
Telegraph Service	340,	—	—	340,	—	—
	60,312,	60,612,	2,291,	1,991,	59,812,	60,550,
Property Tax	7,765,	8,906,	1,141,	—	7,281,	5,696,
	68,077,	69,518,	3,432,	1,991,	67,093,	66,245,
Crown Lands	377,	362,	—	15,	347,	332,
Miscellaneous	3,417,	3,882,	—	35,	2,967,	2,898,
Totals	71,871,	73,262,	3,432,	2,041,	70,307,	69,470,
			NET DEC. £1,391,292			

REVENUE.—UNITED KINGDOM.—QUARTER ENDED 30TH SEPT., 1870:—

An Account showing the REVENUE and other RECEIPTS in the QUARTER ended 30th of September, 1870 ; the ISSUES out of the same, and the Charges on the Consolidated Fund at that Date, and the Surplus or Deficiency of the Balance in the Exchequer on the 30th of September, 1870, in respect of such Charges.

Received:—

	£
Surplus Balance in the Exchequer on the 30th June, 1870, beyond the Amount of the Charge on the Consolidated Fund on that date, as per last Account	668,484
Income received, as shown in Account I	14,202,418
Amount received in Repayment of Advances for Public Works, &c. ...	816,187
Ditto for Greenwich Hospital	53,598
Amount cancelled on account of the Charge on the 30th of June, 1870...	78
	<u>£15,285,710</u>
Excess of the Sums charged on the Consolidated Fund on the 30th of September, 1870, payable in December Quarter, 1870, above the Balance in the Exchequer at that date, viz.:—	
Excess of Charge in Great Britain	£3,425,300
Surplus over Charge in Ireland	842,577
Net deficiency	<u>2,582,748</u>
	<u>£17,818,458</u>

Paid:—

	£
Amount applied out of the Income to <i>Supply Services</i>	2,887,866
Amount advanced for New Courts of Justice	5,000
Charge of the <i>Consolidated Fund</i> on the 30th of September, 1870, viz.:—	
Interest of the Permanent Debt	£4,916,204
Terminable Annuities	581,676
Interest of Exchequer Bonds	9,750
Interest of Exchequer Bills	29,276
The Civil List	101,465
Other Charges on Consolidated Fund	667,127
Advances for Public Works, &c.	411,688
Sinking Fund	1,808,406
	<u>7,975,587</u>
	<u>£17,818,458</u>

* Charge on 30th September, 1870	£7,975,587
Paid out of growing produce in September quarter, 1870	964,197
Portion of the Charge payable in December quarter, 1870.....	7,011,390
To meet which there was in the Exchequer on the 30th of September, 1870	<u>4,428,647</u>
Net deficiency as above	<u>2,582,748</u>

**BRITISH CORN.—Gazette Average Prices (ENGLAND AND WALES),
Third Quarter of 1870.**

[This Table is communicated by the Statistical and Corn Department, Board of Trade.]

Weeks ended on a Saturday, 1870.		Weekly Average. (Per Impl. Quarter.)					
		Wheat.		Barley.		Oats.	
		s.	d.	s.	d.	s.	d.
July	2	51	6	32	—	25	10
"	9	50	7	30	3	25	8
"	16	49	8	31	2	25	6
"	23	49	9	31	2	26	11
"	30	52	10	33	5	26	9
<i>Average for July</i>		50	10	31	7	26	1
Aug.	6	54	11	31	8	28	8
"	13	54	10	32	11	28	—
"	20	54	7	33	5	25	10
"	27	61	3	36	8	24	6
<i>Average for August</i>		53	10	33	8	26	9
Sept.	8	49	1	36	2	25	9
"	10	48	1	35	8	23	10
"	17	46	6	36	4	23	9
"	24	45	4	36	2	20	7
<i>Average for September</i>		47	3	36	1	23	5
<i>Average for the quarter</i>		50	4	33	9	26	3

RAILWAYS.—PRICES, July—September;—and TRAFFIC, January—September, 1870.

[Abstract from "Herald's Journal" and the "Times."]

Total Capital Ex- pended Mins.	Railway.	For the (£100). Price on			Miles Open.		Total Traffic. 39 Weeks. (000's omitted.)		Traffic pr. Mile pr. Wk. 39 Weeks.		Dividends per Cent. for Half Years.			
		1st Sept.	1st Aug.	1st July.	'70.	'69.	'70.	'69.	'70.	'69.	June, '70.	Dec., '69.	June, '69.	
£					No.	No.	£	£	£	£	s. d.	s. d.	s. d.	
58,5	Lond. & N. Westn.	125½	123½	129½	1,504	1,447	5,163,	4,907,	88	84	60	—	70	55
45,7	Great Western	68½	63	72½	1,386	1,386	3,208,	3,114,	59	57	30	—	32 3	20
21,1	„ Northern	119	116	121½	487	487	1,622,	1,555,	86	82	50	—	77 6	42 6
29,7	„ Eastern	35½	32½	39½	748	746	1,512,	1,473,	52	50	Nil	—	10	5
17,7	Brighton	38½	35½	43½	368	366	942,	941,	65	65	„	—	10	Nil
18,6	South-Eastern	68½	67	76½	346	346	1,111,	1,127,	82	83	25	—	40	25
17,4	„ Western	86	87	91	560	553	1,086,	1,095,	50	50	40	—	52 6	40
208,7		77	75	82	5,399	5,331	14,644,	14,212,	69	68	29 3	—	41 9	26 9
35,8	Midland	124½	123	131	826	789	2,763,	2,547,	86	82	62 6	—	65	57 6
23,5	Lancsh. and York.	127½	128	133½	423	420	1,972,	1,915,	119	117	70	—	67 6	67 6
15,9	Sheffield and Man.	42	40½	51½	249	251	876,	906,	90	93	10	—	25	20
40,7	North-Eastern	137½	133½	145½	1,275	1,275	3,341,	3,005,	66	60	72 6	—	72 6	57 6
115,9		108	106	115½	2,773	2,785	8,952,	8,373,	83	78	53 9	—	57 6	50 7
22,5	Caledonian	74	75	77½	679	677	1,569,	1,518,	59	57	25	—	37 6	35
6,2	Gt. S. & Wn. Ir. Ind.	101	102	108	419	419	—	—	—	—	50	—	50	50
353,3	Gen. aver.	88½	86½	98½	9,270	9,162	—	—	—	—	38 1	—	46 11	36 7

Consols.—Money Prices, 1st September, 92.—1st August, 89½.—1st July, 92½.

Exchequer Bills.—1st Sept., par to 5s. pm.—1st Aug., 1s. to 6s. pm.—1st July, par to 5s. pm.

BANK OF ENGLAND.—WEEKLY RETURN.

Pursuant to the Act 7th and 8th Victoria, c. 32 (1844), for Wednesday in each Week, during the THIRD QUARTER (July—Sept.) of 1870.

[0,000's omitted.]

ISSUE DEPARTMENT.					COLLATERAL COLUMNS.	
1	2	3	4	5	6	7
Liabilities.		Assets.			Notes in Hands of Public. (Col. 1 minus col. 16.)	Minimum Rates of Discount at Bank of England.
Notes Issued.	DATES. (Wednesdays.)	Government Debt.	Other Securities.	Gold Coin and Bullion.		
£		£	£	£	£	
Mins.	1870.	Mins.	Mins.	Mins.	Mins.	1869. Per ann.
35,45	July 6	11,01	3,98	20,45	23,91	4 Nov. 3 p.ct.
35,09	„ 13	11,01	3,98	20,09	23,90	
34,55	„ 20	11,01	3,98	19,55	24,27	21 July 3½ „
33,39	„ 27	11,01	3,99	18,89	24,17	23 „ 4 „
32,96	Aug. 3	11,01	3,98	17,96	24,43	28 July 5 „
33,23	„ 10	11,01	3,98	18,23	23,78	4 Aug. 6 „
33,81	„ 17	11,01	3,98	18,81	23,53	11 „ 5½ „
34,11	„ 24	11,01	3,98	19,11	23,25	18 „ 4½ „
34,75	„ 31	11,01	3,98	19,75	23,36	25 „ 4 „
35,16	Sept. 7	11,01	3,98	20,16	23,47	1 Sept. 3½ „
35,68	„ 14	11,01	3,98	20,68	23,07	15 „ 3 „
35,92	„ 21	11,01	3,98	20,92	23,07	29 „ 2½ „
36,57	„ 28	11,01	3,98	21,57	23,29	

BANKING DEPARTMENT.

8	9	10	11	12	13	14	15	16	17	18
Liabilities.					DATES. (Wednesdays.)	Assets.				Totals of Liabilities and Assets.
Capital and Rest.		Deposits.		Seven Day and other Bills.		Securities.		Reserve.		
Capital.	Rest.	Public.	Private.			Government.	Other.	Notes.	Gold and Silver Coin.	
£	£	£	£	£	1870.	£	£	£	£	£
Mins.	Mins.	Mins.	Mins.	Mins.	July 6	Mins.	Mins.	Mins.	Mins.	Mins.
14,55	3,32	7,09	20,97	,42	July 6	12,49	21,31	11,54	,99	46,35
14,55	3,56	5,94	18,73	,45	„ 13	12,49	18,43	11,19	,91	43,03
14,55	3,39	5,67	19,81	,44	„ 20	12,51	20,17	10,28	,89	43,86
14,55	3,41	5,87	21,01	,57	„ 27	12,51	22,83	9,22	,86	45,41
14,55	3,45	6,09	20,59	,63	Aug. 3	12,48	23,49	8,53	,80	45,31
14,55	3,45	5,61	20,70	,68	„ 10	12,48	22,21	9,45	,85	44,99
14,55	3,47	5,34	20,44	,81	„ 17	12,48	20,89	10,28	,97	44,62
14,55	3,43	5,26	20,03	,90	„ 24	12,48	19,95	10,86	,89	44,18
14,55	3,66	5,58	19,94	,86	„ 31	12,48	19,83	11,39	,89	44,60
14,55	3,67	6,11	19,31	,81	Sept. 7	12,48	19,44	11,69	,83	44,46
14,55	3,67	6,06	19,54	,89	„ 14	12,48	18,73	12,61	,87	44,73
14,55	3,71	6,28	18,36	,89	„ 21	12,48	17,61	12,85	,85	43,80
14,55	3,72	6,34	18,29	,92	„ 28	12,48	17,25	13,28	,81	43,82

LONDON CLEARING; CIRCULATION, PRIVATE AND PROVINCIAL.

The London Clearing, and the Average Amount of Promissory Notes in Circulation ENGLAND and WALES on Saturday in each Week during the THIRD QUARTER (July–September) of 1870; and in SCOTLAND and IRELAND, at the Three Dates, as under.

[0,000's omitted.]

ENGLAND AND WALES.					SCOTLAND.				IRELAND.		
DATES. <i>Saturday.</i>	<i>London: Cleared in each Week ended Wednesday.*</i>	<i>Private Banks. (Fixed Issues, 4,03).</i>	<i>Joint Stock Banks. (Fixed Issues, 2,74).</i>	<i>TOTAL. (Fixed Issues, 6,77).</i>	<i>Weeks ended</i>	<i>£5 and upwards.</i>	<i>Under £5.</i>	<i>TOTAL. (Fixed Issues, 2,75).</i>	<i>£5 and upwards.</i>	<i>Under £5.</i>	<i>TOTAL. (Fixed Issues, 6,35).</i>
1870.	£	£	£	£	1870.	£	£	£	£	£	£
July 2	67,52	2,51	2,20	4,71	July 16	1,97	3,01	4,98	3,41	3,02	6,43
„ 9	106,58	2,55	2,25	4,80							
„ 16	71,92	2,49	2,23	4,72							
„ 23	100,93	2,47	2,19	4,66							
„ 30	65,47	2,42	2,17	4,59							
Aug. 6	89,53	2,40	2,16	4,56	Aug. 13	1,88	2,94	4,82	3,33	2,93	6,26
„ 13	69,06	2,36	2,14	4,50							
„ 20	78,52	2,33	2,13	4,46							
„ 27	60,34	2,34	2,13	4,48							
Sept. 3	69,31	2,38	2,16	4,53	Sept. 10	1,80	2,94	4,74	3,29	2,95	6,24
„ 10	65,33	2,41	2,20	4,61							
„ 17	63,89	2,44	2,23	4,67							
„ 24	70,69	2,49	2,25	4,74							

* The Wednesdays *preceeding* the Saturdays.

FOREIGN EXCHANGES.—*Quotations as under, LONDON on Paris, Hamburg as Calcutta;—and New York, Calcutta, Hong Kong and Sydney, on LONDON—via collateral cols.*

1	2 3 4 5			6	7	8 9		10	11	12	
DATES.	Paris.				London on Hamburg. 3 m. d.	New York. 60 d. s.	Calcutta.		Hong Kong. 6 m. s.	Syd- ney. 30 d. s.	Standard Silver in bars in London pr. oz.
	London on Paris. 3 m. d.	Bullion as Arbitrated.		Prem. or Dis. on Gold per Mille.			India Council. 60 d. s.	At Calcutta on London. 6 m. d.			
		Agnat. Engd.	For Engd.								
1870.		pr. ct.	pr. ct.			pr. ct.	d.	d.	d.	pr. ct.	d.
July 9.	25·45	—	—	—	13·10½	109½	23½	23½	54½	½ pm.	60½
„ 23.	·60	—	—	—	·14	110½	28	„	55	„	½
Aug. 6.	·65	—	—	—	·12	109½	22½	23½	54½	—	½
„ 20.	26·0	—	—	—	·13	„ ½	„	„	54	—	½
Sept 3.	25·60	—	—	—	·11½	„ ½	„	22½	52	—	½
„ 10.	26·0	—	—	—	·10½	„ „	„	„	„ ½	—	½

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